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OFFICIAL YEAR BOOK OF THE COMMONWEALTH
OF AUSTRALIA.

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Australia.
COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,
CANBERRA.

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OFFICIAL

YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA

No. 38.—1951.

Prepared under Instructions from
The Right Honorable the Treasurer,

BY

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PREFACE.

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered "to make laws for the peace, order, and good government of the Commonwealth, with respect to Census and Statistics." In the exercise of the power so conferred, a "Census and Statistics Act" was passed in 1905, and in the year following the "Commonwealth Bureau of Census and Statistics" was created. The first Official Year Book was published early in 1908. The publication here presented is the thirty-eighth Official Year Book issued under the authority of the Commonwealth Government.

The synopsis on pp. ix to xxvii immediately following shows the general arrangement of the work. The special index (following the usual general index) provided at the end of the volume, together with certain references given in the various Chapters, will assist in tracing in previous issues special articles and other more or less important miscellaneous matter which, owing to limitations of space, have been omitted or are not printed fully in the present volume.

Every endeavour has been made to meet the demand occasioned by the current economic and financial conditions for new information, or information expressed in new terms, concerning many branches of statistics, while a diary of the principal financial and economic events of the years 1946 to 1949 is inserted after the last chapter.

It is not proposed to refer here to the whole of the new matter or to the new treatment of existing matter incorporated in the present volume, but attention may be drawn to the following:—

Chapter II. Physiography.—Climate and Meteorology of Australia (pp. 30-70)

Chapter III. General Government.—Commonwealth Ministers of State, 1925 to 1949 (pp. 74-9); Conspectus of Parliamentary Superannuation Funds (pp. 91-9); Legislation during 1948 (pp. 104-7).

Chapter V. Transport and Communication.—World Shipping Tonnage (pp. 153-4); World Telephone Statistics (pp. 223-4).

Chapter VI. Education.—University Extension (pp. 247-8).

Chapter VII. Public Justice.—Powers of Magistrates (pp. 273-4); Habitual Offenders (pp. 282-3).

Chapter VIII. Public Health and Related Institutions.—This Chapter comprises the whole of the old chapter "Public Hygiene" together with matter relating mainly to hospitals from the old chapter "Public Benevolence, etc."

State Public Health Legislation and Administration (pp. 295-9).

Chapter IX. Welfare Services.—This chapter covers the balance of the matter previously appearing in old chapter "Public Benevolence, etc.", and relates to the Commonwealth Social Service Benefits and other welfare services. The explanatory matter respecting the various Commonwealth benefits has been rewritten.

Chapter XII. Trade.—Import values throughout this and other chapters changed to f.o.b. values in Australian currency.

Imperial Preference in the United Kingdom (pp. 471-3).

Chapter XIII. Population.—Final Results of 1947 Census of Population and Dwellings and Final Population Estimates for the Intercensal Period 1933-1947 (pp. 517 *et seq* and pp. 1303-4; Assisted Migration into Australia (pp. 576-9); Citizenship and Naturalization (p. 583).

Chapter XVI. Private Finance.—Classification of Advances of Commonwealth Bank and Nine Trading Banks (p. 720).

Chapter XVII. Public Finance.—Commonwealth Trust Funds—Receipts, Expenditure, Balances of more important individual Funds (p. 790); Commonwealth Expenditure on Capital Works and Services (p. 792); Commonwealth and State Public Debt—now a separate section (p. 816).

Chapter XIX. Pastoral Production.—Movement in Sheep Numbers (p. 910); Wool Classified according to Quality (p. 923).

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- Chapter XX. Agricultural Production.—International Wheat Agreement (p. 944); Classification in Area Series of Rural Holdings (pp. 947, 1022).
 Chapter XXI. Farmyard, Dairy and Bee Products.—Classification according to size of Herd of Holdings carrying Dairy Cattle (p. 1028) and Holdings carrying Pigs (p. 1040).
 Chapter XXII. Forestry.—Forestry and Timber Bureau (p. 1062).
 Chapter XXIII. Fisheries.—Inquiries and Research (p. 1082).
 Chapter XXV. Water Conservation and Irrigation.—Dams and Reservoirs (p. 1149); Snowy Mountains Hydro-Electric Scheme (p. 1157).
 Appendix.—Australian Life Tables 1946-48 (p. 1305).

The material in the Year Book has been carefully checked throughout, but I shall be grateful to those who will be kind enough to point out defects or make suggestions.

Printing difficulties are still being experienced and have delayed the publication of this volume. Compared with the previous volume, however, the figures have been advanced by two years.

Later information which has been compiled since the various Chapters were sent to press has been incorporated in the Appendix (p. 1282). Opportunity has been taken therein to advance as far as possible, in summarized form, the more important statistics of the foregoing chapters. In some cases information has been extended to 1950.

Commencing with this issue a change in the title of the Year Book has been made, the year now shown being the year of issue.

My thanks are tendered to the State Statisticians, who have collected and compiled the data on which a great part of the information given in the Official Year Book is based. Thanks are also tendered to the responsible officers of the various Commonwealth and State Departments, and to others who have kindly, and often at considerable trouble, supplied information; special mention should be made of the services of the Chief Draftsman of the Property and Survey Branch, Department of the Interior, who was responsible for the drawing of the graphs throughout this volume.

An expression of keen appreciation is due in respect of the valuable work performed by Mr. S. H. Begley, Editor of Publications, Mr. J. M. Jones, B.A., Assistant Editor, and the other officers of the Publications Division, and of the services rendered by the officers in charge of the several branches of the Commonwealth Bureau of Census and Statistics, upon whom has devolved the duty of revising the Chapters relative to their respective branches.

ROLAND WILSON,
 Commonwealth Statistician.

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,
 Canberra, A.C.T., October, 1950.

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STATISTICAL SUMMARY.

STATISTICAL SUMMARY, AUSTRALIA.

Heading.		Years.								
		1881.	1891.	1901.	1911.	1921.	1931.	1941.	1948.	
Population(a) ..	Males	1,247,059	1,736,617	2,004,836	2,382,232	2,799,462	3,332,577	3,598,644	3,910,051	
	Females	1,059,677	1,504,368	1,820,077	2,191,554	2,711,532	3,220,029	3,544,954	3,884,829	
	Persons	2,306,736	3,240,985	3,824,913	4,573,786	5,510,994	6,552,606	7,143,598	7,794,880	
Births ..	No.	80,004	110,187	102,945	122,193	136,198	118,509	134,525	177,976	
	Rate	35.26	34.47	27.16	27.21	24.95	18.16	18.92	23.08	
Deaths ..	No.	33,327	47,430	46,330	47,869	54,076	56,560	71,176	76,839	
	Rate	14.69	14.84	12.22	10.66	9.91	8.67	10.01	9.96	
Marriages ..	No.	17,244	23,862	27,753	39,482	46,869	38,882	75,148	74,902	
	Rate	7.60	7.47	7.32	8.79	8.59	5.96	10.57	9.71	
		1881-82.	1891-92.	1901-02.	1911-12.	1921-22.	1931-32.	1941-42.	1948-49.	
Agriculture—										
Wheat ..	Area '000 acs.	2,996	3,335	5,116	7,428	9,719	14,741	12,003	12,583	
	Yld. '000 bus.	21,444	25,675	38,562	71,636	129,089	190,612	166,713	190,703	
	Av. Yld. bus.	7.16	7.70	7.54	9.64	13.28	12.93	13.89	15.15	
Oats ..	Area '000 acs.	195	246	461	617	733	1,085	1,460	1,770	
	Yld. '000 bus.	4,796	5,726	9,790	9,562	12,147	15,195	22,302	23,601	
	Av. Yld. bus.	24.62	23.27	21.22	15.50	16.56	14.00	15.27	13.34	
Barley ..	Area acs.	75,864	68,068	74,511	116,466	298,910	342,396	784,253	1,011,768	
	Yld. '000 bus.	1,353	1,179	1,520	2,057	6,086	6,291	18,004	17,785	
	Av. Yld. bus.	17.84	17.31	20.40	17.66	20.36	18.37	22.96	17.58	
Maize ..	Area acs.	165,777	284,428	294,849	340,065	305,186	269,448	301,360	181,958	
	Yld. '000 bus.	5,726	9,262	7,035	8,940	7,840	7,062	7,436	5,188	
	Av. Yld. bus.	34.54	32.56	23.86	26.29	25.69	26.21	24.67	28.51	
Hay ..	Area '000 acs.	768	942	1,688	2,518	2,995	2,635	2,758	1,580	
	Yld. '000 tons	767	1,067	2,025	2,868	3,902	3,167	3,575	2,292	
	Av. Yld. tons	1.00	1.13	1.20	1.14	1.30	1.20	1.30	1.45	
Potatoes ..	Area acs.	(b) 76,265	112,884	109,685	139,462	149,144	145,111	99,324	119,682	
	Yld. tons	(b) 243,216	380,477	322,524	301,489	388,091	397,102	332,727	459,812	
	Av. Yld. tons	(b) 3.19	3.37	2.94	2.31	2.60	2.74	3.35	3.84	
Sugar-cane ..	Area (e) acs.	19,708	45,444	86,950	101,010	128,356	241,576	254,504	266,330	
	Yld. '000 tons	350	738	1,368	1,682	2,437	4,213	5,154	6,708	
	Av. Yld. tons	17.74	16.23	15.73	16.65	18.99	17.44	20.25	25.19	
Vineyards ..	Area acs.	14,569	48,882	63,677	60,602	92,414	112,961	129,739	135,272	
	Wine '000 gal.	1,438	3,438	5,262	4,975	8,543	14,191	16,045	34,183	
Total net value of all agricultural production ..		£'000 (d) 15,519	(d) 16,988	(d) 23,835	(d) 38,774	(d) 81,890	49,714	62,412	151,463	
Pastoral, dairying, etc.—										
Live-stock ..	Horses '000	1,088	1,585	1,620	2,278	2,438	1,776	1,611	1,115	
	Cattle ..	8,011	11,112	8,491	11,829	14,441	12,261	13,561	14,124	
	Sheep ..	65,093	106,421	72,040	96,886	86,119	110,619	125,189	108,735	
	Pigs ..	703	846	931	1,111	960	1,168	1,477	1,196	
Wool production(e) ..		(f) 319,649	(f) 634,046	(f) 539,395	(f) 798,391	723,059	1,007,455	1,167,158	1,030,397	
Butter ..		(g) 18,891	(f) 40,316	(f) 40,316	(f) 94,676	(f) 110,228	171,605	167,631	165,830	
Cheese ..		(g)	(f) 4,523	(f) 5,288	(f) 7,092	(f) 14,577	14,028	30,143	43,202	
Meat(h)—										
Beef and Veal ..	}	(g)	(g)	(g)	(g)	{	339,495	349,835	533,502	
							218,381	307,277	371,726	
							11,060	22,746	58,086	
Mutton and Lamb ..		(g)	(f) 7,487	(f) 15,188	(f) 23,810	26,173	31,751	42,464		
Pork ..		(g)	(g)	(g)	(g)	608,196	727,484	1,027,010		
Bacon and Ham ..										
Total ..										
Total net value of—										
Pastoral production		£'000 (d) 29,538	(d) 39,256	(d) 36,890	(d) 72,883	(d) 119,399	{ 43,025	85,358	244,739	
Dairying ..							{ 22,564	34,344	67,553	
		1881.	1891.	1901.	1911.	1921.	1931.	1941.	1948.	
Mineral production—										
Gold ..		£'000 5,194	5,282	14,018	10,552	4,019	3,564	15,991	9,530	
Silver and lead ..		416	3,736	2,249	3,022	1,540	1,444	6,256	21,130	
Copper ..		714	367	2,215	2,564	804	568	1,505	1,744	
Tin ..		1,146	561	448	1,210	418	216	1,001	1,000	
Zinc ..		638	3	4	1,415	283	513	1,590	5,770	
Coal (Black and Brown) ..		638	1,912	2,603	3,927	11,015	6,194	11,064	19,993	
Total value of all mineral production ..		£'000 7,820	12,074	21,817	23,303	20,029	13,191	41,690	64,392	
Forestry production—										
Quantity of local timber sawn or hewn ..		(g)	(g)	452,181	604,794	590,495	236,707	913,675	1,184,088	

(a) At 31st December. (b) Partly estimated. (c) Productive cane. (d) Gross value. (e) In terms of greasy. (f) Years ended December. (g) Not available. (h) Bone-in weight in terms of fresh meat; cured weight, bacon and ham.

STATISTICAL SUMMARY, AUSTRALIA—continued.

Heading.		Years.							
		1881.	1891.	1901.	1911.	1921-22.	1931-32.	1941-42.	1948-49.
Factories—									
No. of factories ..	No.				14,455	18,023	21,657	26,971	40,070
Hands employed ..	No.				311,710	373,540	336,055	725,342	890,232
Wages paid ..	£'000				27,528	60,051	55,932	180,052	339,287
Value of production ..	"				51,259	121,674	110,982	316,439	568,415
Total value of output ..	"				133,022	320,341	281,046	773,059	1,425,025
Shipping—									
Oversea vessels entered and cleared ..	No. '000 tons	3,284	3,778	4,028	4,174	3,111	3,067	2,544	3,486
		2,549	4,726	6,542	9,985	9,081	11,396	10,768	15,013
Commerce—									
Imports, oversea ..	£'000 f.o.b.	26,480	34,355	38,057	61,008	93,803	51,789	173,505	415,194
per head ..	£ s. d.	11/13/5	10/15/0	10/4/0	13/11/7	17/0/9	7/15/1	21/0/0	53/4/0
Exports, oversea ..	£'000 f.o.b.	27,528	36,043	49,096	79,182	127,847	108,404	102,477	542,673
per head ..	£ s. d.	12/2/7	11/5/6	13/2/2	17/13/11	23/4/0	16/10/11	23/13/1	60/11/8
Total oversea trade ..	£'000 f.o.b.	54,008	70,398	80,353	140,190	221,740	100,193	312,570	957,867
per head ..	£ s. d.	23/16/0	22/0/6	23/0/2	31/5/6	40/4/9	24/9/0	17/1/1	122/16/5
Net Customs and Excise duties ..	£'000	4,809	7,441	8,657	13,515	27,565	28,525	55,700	126,197
per head ..	£ s. d.	2/2/5	2/6/7	2/5/8	2/19/2	5/0/1	4/7/1	7/15/11	16/3/8
Principal Oversea Exports(b)—									
Wool ..	'000 lb.(c)	329,200	640,753	517,929	722,365	945,931	903,488	937,685	1,320,898
	£'000 f.o.b.	13,173	10,046	15,237	26,071	42,277	32,102	58,041	231,306
Wheat ..	'000 bus.	5,365	9,795	20,260	55,148	99,947	127,401	22,313	83,030
	£'000 f.o.b.	1,190	1,937	2,775	9,042	28,044	19,220	4,945	14,705
Flour ..	'000 short tons	50	33	97	176	360	611	414	855
	£'000 f.o.b.	520	328	590	1,392	5,520	3,833	4,191	33,721
Butter ..	'000 lb.	1,294	4,240	31,536	101,722	127,347	201,634	130,347	183,552
	£'000 f.o.b.	39	207	1,448	4,637	7,968	10,250	8,125	23,800
Hides and skins ..	"	317	874	1,251	3,227	3,137	2,316	5,982	12,205
Tallow (inedible) ..	"	644	571	678	1,936	1,442	831	842	965
Meats ..	"	363	461	2,611	4,303	5,542	6,370	14,094	29,762
Timber (undressed) ..	"	118	38	731	1,024	1,158	433	320	1,707
Gold ..	"	6,445	5,704	14,316	12,046	3,483	11,893	9,188	4
Silver and lead ..	"	58	1,932	2,250	3,213	2,697	2,902	7,434	23,664
Copper ..	"	677	418	1,619	2,346	705	472	18	117
Coal ..	"	361	646	987	901	1,100	342	259	97
Government Railways—									
Length of line open ..	miles	3,832	9,541	12,579	16,078	23,502	26,959	27,241	27,053
Capital cost ..	£'000	42,741	99,764	123,224	152,195	244,353	321,972	322,152	355,975
Gross revenue ..	"	3,910	8,654	11,038	17,848	38,195	37,580	66,482	86,791
Working expenses ..	"	2,142	5,630	7,134	10,946	29,818	28,142	51,043	84,956
Per cent. of working expenses on gross revenue ..	%	54.77	65.06	64.63	61.33	78.07	74.88	76.78	97.89
Postal—									
Letters and postcards dealt with ..	'000	67,640	157,297	220,853	453,063	561,973	(d) 731,135	921,901	1,094,281
per head ..	No.	29.61	49.07	58.26	100.90	102.01	(d) 111.62	129.17	140.31
Newspapers dealt with ..	'000	38,063	85,280	102,727	141,638	140,477	139,502	(d) 177,974	(d) 240,049
per head ..	No.	16.06	26.61	27.10	31.54	25.50	21.30	(d) 24.94	(d) 30.78
Cheque-paying Banks (e)—									
Note circulation ..	£'000	3,979	4,417	3,399	3,718	(f) 214	197	167	158
Coin and bullion held ..	"	9,108	16,713	19,781	33,471	21,627	1,949	1,533	2,954
Advances ..	"	57,733	129,742	86,353	108,579	193,436	227,139	269,944	377,544
Deposits ..	"	53,849	98,345	91,487	143,447	(g) 273,807	270,114	380,502	824,172
Savings Banks (h)—									
Total deposits ..	£'000	7,854	15,537	30,883	59,394	154,396	197,966	274,275	714,219
Av. per head of population £ s. d.		3/10/5	4/18/7	8/3/0	13/8/5	28/0/4	30/1/11	38/3/11	91/12/7
						1921.	1931.	1941.	1948.
State Schools—									
Schools ..	No.	4,494	6,231	7,012	8,060	9,445	10,097	9,535	7,971
Teachers ..	"	9,028	12,564	14,500	16,971	26,120	33,762	32,066	33,287
Enrolment ..	"	432,320	561,153	638,478	638,850	819,042	936,901	886,655	928,067
Average attendance ..	"	255,143	350,773	450,246	463,799	666,498	817,262	732,116	770,554

(a) Owing to variation in classification, effective comparison is impossible. (b) Australian produce, except gold which includes re-exports. Australian currency values. (c) In terms of greasy. (d) Includes packets. (e) Figures for first three years are averages for the December quarter; the remainder for the June quarter. All cheque-paying banks prior to 1931-32, nine trading banks only thereafter. (f) Decrease due to prohibition of re-issue. (g) Includes Commonwealth Savings Bank deposits. (h) First three years at 31st December; remainder 30th June.

CHRONOLOGICAL TABLE.

CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

NOTE.—The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table the names now borne by the States serve to indicate the localities.

Year.

- 1788 N.S.W.—Arrival of "First Fleet" at Botany Bay. Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove. Formal proclamation of colony on 7th February. Branch Settlement established at Norfolk Island. French navigator Lapérouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.
- 1789 N.S.W.—First wheat harvest at Parramatta, near Sydney. Discovery of Hawkesbury River.
- 1790 N.S.W.—Scarcity of provisions. "Second Fleet" reached Port Jackson. Landing of the New South Wales Corps.
- 1791 N.S.W.—Arrival of "Third Fleet". Territorial seal brought by Governor King.
- 1792 N.S.W.—Visit of *Philadelphia*, first foreign trading vessel.
- 1793 N.S.W.—First free immigrants arrived in the *Bellona*. First Australian church opened at Sydney. Tas.—D'Entrecasteaux discovered the Derwent River.
- 1794 N.S.W.—Establishment of settlement at Hawkesbury River.
- 1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.
- 1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fishermen at Newcastle.
- 1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.
- 1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.
- 1800 N.S.W.—Hunter River coal-mines worked. First Customs House in Australia established at Sydney. Flinders' charts published.
- 1801 N.S.W.—First colonial manufacture of blankets and linen.
- 1802 Vic.—Discovery of Port Phillip by Lieut. Murray. Q'land.—Discovery of Port Curtis and Port Bowen by Flinders. S.A.—Discovery of Spencer's and St. Vincent Gulfs by Flinders.
- 1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of "The Sydney Gazette", first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.
- 1804 Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins.
- 1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur.
- 1806 N.S.W.—"The great flood" on the Hawkesbury. Shortage of provisions. Tas.—Settlement at Launceston.
- 1807 N.S.W.—First shipment of merchantable wool (245 lb.) to England.
- 1808 N.S.W.—Deposition of Governor Bligh.
- 1809 N.S.W.—Free school established.
- 1810 N.S.W.—Post Office officially established at Sydney.
- 1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson and Blaxland. Macquarie River discovered by Evans.
- 1814 N.S.W.—Flinders suggested the name "Australia", instead of "New Holland". Creation of Civil Courts.
- 1815 N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.
- 1816 N.S.W.—Sydney Hospital opened.
- 1817 N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia—Bank of New South Wales—opened at Sydney.

Year.

- 1818 N.S.W.—Liverpool Plains, and the Peel, Hastings and Manning Rivers discovered by Oxley, and Port Essington by Captain King.
- 1819 N.S.W.—First Savings Bank in Australia opened at Sydney.
- 1820 Tas.—First importation of pure merino sheep from Camden Park (N.S.W.) flocks.
- 1821 Tas.—Establishment of penal settlement at Macquarie Harbour.
- 1823 N.S.W.—New South Wales Judicature Act passed. Discovery of gold at Fish River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by Oxley.
- 1824 N.S.W.—Constituted a Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Legislative Council. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Fort Dundas Settlement formed at Melville Island, N. Terr.
- 1825 Tas.—Van Diemen's Land (Tasmania) proclaimed a separate colony. Qld.—Major Lockyer explored Brisbane River to its source and discovered coal.
- 1826 N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright.
- 1827 Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham. W.A.—Military settlement founded at King George's Sound by Major Lockyer. First official claim of British Sovereignty over all Australia.
- 1828 N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.
- 1829 N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.
- 1830 N.S.W.—Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Black line organized to force aborigines into Tasman's Peninsula, but failed. Small remnant subsequently (1830 to 1835) persuaded to settle on Flinders Island.
- 1831 N.S.W.—Crown lands first disposed of at auction. Mitchell's explorations north of Liverpool Plains. SS. *Surprise*, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.
- 1832 N.S.W.—State Savings Bank established.
- 1833 N.S.W.—First School of Arts established at Sydney.
- 1834 N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Brothers. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against Murray River natives at Pinjarrah for continued attacks on settlers.
- 1835 Vic.—John Batman arrived at Port Phillip; foundation of Melbourne.
- 1836 N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland. Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—Settlement founded at Adelaide under Governor Hindmarsh.
- 1837 N.S.W.—Appointment in London of Select Committee on Transportation. Vic.—First overlanders from Sydney arrived at Port Phillip.
- 1838 N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane—first free colonists. S.A.—“Overlanding” of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.
- 1839 N.S.W.—Gold found at Vale of Clwydd by Count Strzelecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.

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- 1840 N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payments for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Penal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George's Sound.
- 1841 N.S.W.—Gold found near Hartley. W.A.—Completion of Eyre's overland journey from Adelaide to King George's Sound. Tas.—Renewal of transportation. New Zealand proclaimed a separate colony.
- 1842 N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.
- 1843 N.S.W.—First Representative Constitution (under Act of 1842). Qld.—Moreton Bay granted legislative representation as a distinct electoral division.
- 1844 Qld.—Leichhardt's expedition to Port Essington. S.A.—Sturt's last expedition inland.
- 1845 N.S.W.—Mitchell's explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper's Creek.
- 1846 N.S.W.—Initiation of meat-preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia.
- 1847 N.S.W.—Iron-smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Qld.—Explorations by Leichhardt, Burnett and Kennedy.
- 1848 N.S.W.—National and Denominational School Boards established. Qld.—Leichhardt's last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.
- 1849 N.S.W.—Indignation of colonists at arrival of convict ship *Hashemy*. Exodus of population to gold-fields of California. Vic.—*Randolph* prevented from landing convicts. Qld.—Assignment of *Hushemy* convicts to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.
- 1850 N.S.W.—Final abolition of transportation. First sod of first Australian railway turned at Sydney. Sydney University founded. Vic.—Gold discovered at Clunes. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted.
- 1851 N.S.W.—Payable gold discovered by Hargraves at Lewis Ponds and Summerhill Creek. Vic.—Port Phillip created an independent colony under the name of Victoria. Discovery of gold in various localities. W.A.—Proclamation of Legislative Council Act.
- 1852 N.S.W.—Arrival of the *Chusan*, first P. and O. mail steamer from England. S.A.—First steamer ascended the Murray River to the junction with the Darling. Tas.—Meeting of first elective Council protested against transportation. Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs.
- 1853 Tas.—Abolition of transportation. Vic.—Melbourne University founded.
- 1854 Vic.—Opening of first Victorian railway—Flinders-street to Port Melbourne. Riots on Ballarat gold-fields. Storming of the Eureka Stockade, 3rd Dec. Telegraph first used.
- 1855 N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened.
- 1856 N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt.
Responsible Governments in N.S.W., Vic., S.A. and Tas. (Act of 1855).
- 1857 N.S.W.—Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.
- 1858 N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne and Adelaide. Qld.—Canoona gold rush.
Population of Australia reached 1,000,000.
- 1859 Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island to Cape Otway.

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- 1860 Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—Copper discoveries at Wallaroo and Moonta. McDouall Stuart reached centre of continent and named “Central Mount Stuart”.
- 1861 N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong gold-fields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burke and Wills perished at Cooper's Creek, near Innamincka, S.A.
- 1862 N.S.W.—Abolition of State aid to religion. Real Property (Torrens) Act passed. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.
- 1863 Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the north-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie gold-field.
- 1864 Qld.—First sugar made from Queensland cane.
- 1866 N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.
- 1867 Vic.—Imposition of protective tariff. Qld.—Discovery of gold at Gympie.
- 1868 W.A.—Arrival of the *Hougomont*, last convict ship.
- 1869 Vic.—Record gold nugget “Welcome Stranger” 2,284 oz. found near Dunolly. W.A.—First telegraph line opened from Perth to Fremantle.
- 1870 N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of trans-continental telegraph.
- 1871 N.S.W.—Permanent military force raised. W.A.—Forrest's explorations. Tas.—Discovery of tin at Mount Bischoff.
- 1872 Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.
- 1873 N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment. Inauguration of mail service with San Francisco.
- 1874 N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison. S.A.—University of Adelaide founded.
- 1876 N.S.W.—Completion of cable—Sydney to Wellington. W.A.—Giles crossed colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aborigines.
- 1877 W.A.—Opening of telegraphic communication with South Australia. Population of Australia reached 2,000,000.
- 1878 Qld.—Restriction of Chinese immigration. Introduction of telephone into Australia.
- 1879 N.S.W.—First artesian bore at Killara. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district, and discovery of the Fitzroy pastoral country.
- 1880 N.S.W.—Public Instruction Act passed. Vic.—First Australian Telephone Exchange opened in Melbourne. Federal Conference at Melbourne and Sydney.
- 1881 N.S.W.—Further restrictions on Chinese immigration. First Australia-wide censuses on same date taken.
- 1882 W.A.—Nugget of gold found between Roeboorne and Cossack.
- 1883 N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities. Federal Conference held at Sydney. Federal Council created.
- 1884 Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.
- 1885 N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district. Tas.—Silver-lead discovered at Mount Zeehan.
- 1886 Tas.—Discovery of gold and copper at Mount Lyell. First session of Federal Council met at Hobart on 26th January.

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- 1887 W.A.—Gold discovered at Southern Cross.
First "Colonial" Conference in London. Australasian Naval Defence Force Act passed.
- 1888 N.S.W.—Restrictive legislation against Chinese, imposing poll-tax of £100.
Qld.—Railway communication opened between Sydney and Brisbane.
Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.
- 1889 Qld.—Railway communication established between Brisbane and Adelaide.
W.A.—Framing of new Constitution. Tas.—University of Tasmania founded.
Population of Australia reached 3,000,000.
- 1890 W.A.—Responsible Government granted.
Meeting at Melbourne of Australasian Federation Conference.
- 1891 N.S.W.—Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison.
First Federal Convention in Sydney, draft bill framed and adopted.
- 1892 W.A.—Discovery of gold at Coolgardie.
- 1893 Financial crisis, chiefly affecting the eastern States.
- 1895 N.S.W.—Free-trade tariff. Land and income taxes introduced.
Conference of Premiers on Federation at Hobart.
- 1896 N.S.W.—People's Federal Convention at Bathurst. Vic.—Wages Board system established by Act of Parliament.
- 1897-8 Sessions of Federal Convention at Adelaide, Sydney and Melbourne.
- 1898 Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia and Tasmania. Requisite statutory number of votes not obtained in New South Wales.
- 1899 First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia and Tasmania. First Labour Government (Queensland).
- 1900 N.S.W.—Old-age pensions instituted.
Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed, 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.
- 1901 Proclamation of the Commonwealth at Sydney. First Federal Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate free-trade established.
- 1902 Completion of Pacific Cable (all-British). First Federal Tariff.
- 1903 Coolgardie and Kalgoorlie Water Supply Scheme completed. Inauguration of the Federal High Court.
- 1904 Commonwealth Conciliation and Arbitration Act.
- 1905 Population of Australia reached 4,000,000. Re-introduction of assisted immigration in New South Wales.
- 1906 Wireless telegraphy installed between Queenscliff, Vic., and Devonport, Tas. Papua taken over by Commonwealth. Excise Tariff Act imposed duties on agricultural machinery except when manufactured "under conditions as to the remuneration of labour which are declared to be fair and reasonable"
- 1907 First telephone trunk line service between Capital Cities, i.e., Sydney and Melbourne. Imperial Conference in London. Declaration of first basic wage in "Harvester Judgment".
- 1908 Canberra chosen as site of Australian Capital.
- 1909 Imperial Defence Conference in London. Visit of Lord Kitchener to report and advise on Australian military defence. Queensland University founded.
- 1910 Penny Postage. Arrival of Yarra and Parramatta, first vessels built for the Royal Australian Navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.

Year.

- 1911 First Federal Census. Transfer of Australian Capital Territory and Northern Territory to Commonwealth. Introduction of compulsory military training. University of Western Australia founded.
- 1912 Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway.
- 1913 Australian Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.
- 1914 Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Federal Parliament. Transfer of Norfolk Island to Commonwealth.
- European War declared 4th August. Australian Navy transferred to British Navy. Australian offer to equip and furnish 20,000 troops accepted. German possessions in South-West Pacific seized by Australian Naval and Military Expeditionary Force. German cruiser *Emden* destroyed by H.M.A.S. *Sydney* at Cocos Islands, 9th November. First contingent landed in Egypt. Australian and New Zealand Army Corps (A.N.Z.A.C.) formed under Sir William Birdwood.
- 1915 Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W.
- Australian and New Zealand troops landed at Gallipoli, 25th April. Evacuation, 18th-20th December. Australian warships with Grand Fleet.
- 1916 Purchase of steamships by the Commonwealth.
- Australian and New Zealand mounted troops organized in mounted divisions and camel corps, operating thereafter in Egypt, Palestine and Syria. Other troops transferred to France. First proposal for compulsory military service defeated by referendum.
- 1917 National Ministry formed under Rt. Hon. W. M. Hughes. Transcontinental (Kalgoorlie-Port Augusta) Railway completed.
- Australian Flying Corps operating with R.F.C. in Palestine and France. Second proposal for compulsory military service defeated by referendum.
- 1918 Population of Australia reached 5,000,000. Australia House (Strand, London) opened by the King.
- Five Australian divisions in France formed into army corps, 1st January. Armistice with Germany, 11th November. Repatriation Commission created.
- 1919 Peace Conference. Return of Australian troops. Flight England to Australia by Capt. (Sir) Ross Smith and Lieut. (Sir) Keith Smith. Peace Treaty signed at Versailles, 28th June.
- 1921 Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia.
- 1922 First lock on River Murray opened at Blanchetown, South Australia. Queensland Legislative Council abolished.
- 1923 First sod turned on the site of Federal Parliament House at Canberra.
- 1924 Directorate of Commonwealth Bank appointed. Australian Loan Council formed.
- 1925 Population of Australia reached 6,000,000. Solar Observatory established at Canberra.
- 1926 Council for Scientific and Industrial Research established. Imperial Conference. Dominion Status defined.
- 1927 Transfer of Seat of Commonwealth Government from Melbourne to Canberra. Beam wireless established.
- 1928 Financial agreement of Commonwealth and States: referendum carried.
- 1929 Commonwealth Bank empowered to mobilize gold reserve.
- 1930 Effects of world-wide severe economic depression felt throughout Australia.
- Wireless phone service with other countries inaugurated. Brisbane-Grafton (N.S.W.) railway, first step towards uniform gauge railway communication between capitals of mainland States, opened. First Australian—Right Hon. Sir Isaac Alfred Isaacs, G.C.M.G., Chief Justice of the High Court—appointed Governor-General of Australia. Telephone trunk line service established between Adelaide and Perth linking up the whole of the mainland States by telephone.

Year.

- 1931 Depression continues. Exchange rate at 130 in January. Initiation of Premiers' Conference plan to meet the financial situation. Commonwealth Bank Act amended to provide for temporary lower reserve against notes. England departed from gold standard. Commonwealth Bank assumed control of exchange rate and lowered it to 125.
- 1932 Sydney Harbour Bridge opened. Australian Broadcasting Commission established. Legislation passed enabling note reserve to be held in sterling securities. Imperial Economic Conference at Ottawa.
- 1933 World Economic Conference in London. Secession Referendum carried (Western Australia.) Antarctica and Ashmore and Cartier Islands taken over by the Commonwealth.
- 1934 Inauguration of England-Australia Air Mail Service.
- 1935 Empire Statistical Conference at Ottawa.
- 1936 Joint Commonwealth and State Marketing Schemes invalidated by decision of the Privy Council in the James case. Tasmania linked with mainland by submarine telephone cable.
- 1937 Imperial Conference in London. Report of the Royal Commission on Monetary and Banking Systems in Australia.
- 1938 New Defence Programme involving expenditure of £63,000,000 over three years. New Trade Treaty with Japan.
- 1939 Population of Australia reached 7,000,000. War declared on Germany, 3rd September.
- Royal Australian Navy placed at disposal of Great Britain. Advance party of Australians embarked for Middle East, 15th December.
- 1940 Exchange of Ministers between Australia and United States of America. Exchange of High Commissioners between Australia and Canada.
- First Australian convoy (6th Australian Division) sailed for Middle East. Cruiser *Sydney* crippled Italian cruiser *Bartolomeo Colleoni*.
- 1941 Establishment of Commonwealth Child Endowment Scheme. United States Congress passed Lend-Lease Bill. Japanese attack on Pearl Harbour. Australia declared war on Japan, 9th December.
- Australian destroyers in "Tobruk Ferry Run". *Sydney* lost after fight with *Steiermark*. R.A.A.F. in defence of Britain, in Middle East and at Singapore. Australian forces engaged in Middle East, Greece, Crete and Syria. Arrival of units of Eighth Australian Division in Malaya.
- 1942 Darwin bombed. United States armed forces land in Australia. General Douglas MacArthur Supreme Commander of Allied Forces in South-west Pacific. Federal uniform taxation adopted. Commonwealth widows' pensions introduced. Japanese submarines sunk in Sydney Harbour. Rationing of commodities. Exchange of Ministers between Netherlands, Union of Soviet Socialist Republics and Australia.
- Ninth Australian Division launched first attack in British thrust at El Alamein (North Africa). Fall of Singapore, 15th February. Japanese landed at Rabaul. Coral Sea Battle. Australians withdrew from Kokoda. Australian cruisers lead attack on Solomon Islands. Japanese forced to withdraw from Milne Bay. Australians recaptured Kokoda and Gorari, and captured Oivi, Wairopi and Gona.
- 1943 Price Stabilization Scheme. Mortgage Bank Department of Commonwealth Bank opened. National Works Council formed.
- Australian forces combined with American forces to recapture many places in New Guinea. Commencement of long series of amphibious operations in which R.A.N. ships took part. R.A.A.F. from 1943 till end of war operated on all fronts.
- 1944 Allied invasion of France by sea and air on 6th June. Pay-as-you-earn taxation operated from 1st July. Referendum on Constitution Amendment to give Commonwealth Government increased powers in post-war period defeated.
- Australians landed on New Britain; took over from Americans in Bougainville, Solomon Islands, and at Aitape, New Guinea.

Year.

- 1945 H.R.H. the Duke of Gloucester sworn in as Governor-General. Captain Cook Dock opened. Cessation of hostilities in Europe, 8th May. Delegates of 50 countries sign United Nations' Charter at San Francisco. Re-establishment and Employment Act. Cessation of hostilities against Japan, 15th August. Australian National Airlines Act. General demobilization of Armed Forces commenced.

At cessation of hostilities in Pacific, Australian forces were operating in New Guinea, Solomon Islands and Borneo.

- 1946 First meeting of General Assembly of United Nations in London. Arrangements between United Kingdom and Australia, New Zealand, India and South Africa to operate air trunk routes in various parts of world. An Australian observer sent to first meeting to establish International Monetary Fund and Bank. Government plans for increased immigration. Cessation of manpower controls. Arrival of British Rocket Research Mission in Australia. Mutual appointment of Ambassadors between Australia and United States of America. Prime Minister attended conference with United Kingdom and Dominion Prime Ministers in London. Commonwealth Government accepted responsibility for supply and maintenance of BCOF in Japan. Inauguration of Commonwealth Employment Service. Hearing of 40-hour week case commenced. Appointment of Commonwealth Insurance Commissioner. United Kingdom and Dominion Wool Disposals Ltd. (Joint Organization) commenced operations. Conference of Paris to consider draft treaties of peace with Italy, Rumania, Bulgaria, Hungary and Finland. Act to establish National University at Canberra. Coal Industry Act. Commonwealth and State agreement on housing programme to provide employment for 130,000 men over ten years. Commonwealth Trans-Australia Airlines began operations. Sydney-Vancouver fortnightly air service commenced. Constitution Alteration Referendum results granted powers in regard to social services to Commonwealth—powers for marketing and employment refused. Double taxation relief agreement between Australia and Britain signed. Basic wage enquiry, adjourned in 1940, re-opened. Reciprocal air transport agreement between Australia and United States of America signed. Interim basic wage rise. Defence (Transitional Provisions) Act. Expiry of National Security Act.

- 1947 Conference of Provisional International Civil Aviation Organization in Melbourne. Constitution of South Pacific Commission as permanent body. End of demobilization of Australian fighting forces. Industrial Arbitration (Forty Hours Week) Amendment Act (N.S.W.). International Monetary Agreement Act. Expenditure of £250,000,000 on defence in next five years approved. Talks in Canberra between Australian and United States Governments on Pacific strategy and future defence planning. Northern Territory Administration Act provided for establishment of a Legislative Council. Census of Australia—first since 1933. Arrival of Viscount Montgomery, Chief of Imperial General Staff, to discuss aspects of defence. War-time sugar rationing abolished. Australia to take displaced persons as migrants. Full High Court declared invalid Section 48 of Banking Act 1945. Resumption of private trading with Japan authorized. Empire conference on Japanese peace settlement at Canberra. Arbitration Court judgment reduced standard weekly hours of work from 44 to 40. Air Arm of R.A.N. to be established. Banking Act to nationalize trading banks. First party of Australian National Antarctic Research Expedition left for Heard Island to establish scientific research station. First "displaced persons" reached Australia. Act approving Australia becoming member of World Health Organization; also Defence (Transitional Provisions) Act.

- 1948 Forty-hour week effective throughout Australia. BCOF to be controlled and administered by Commonwealth Government. Tram and tramway bus strike in Melbourne—Victorian Essential Services Act. Status of Australian representatives in France, U.S.S.R. and China raised from Minister to

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contd.

Ambassador. R.A.A.F. Reserve to be established. State of emergency declared in connexion with Queensland rail strike—Industrial Law Amendment Act (subsequently repealed.) Scheme for £8,000,000 housing project to meet industrial expansion in Wollongong-Port Kembla district. Representation Act increasing membership of Commonwealth Parliament. First meeting of South Pacific Commission. Proposal for Constitution Alteration (Rents and Prices) defeated at referendum. Australian Iron and Steel Ltd. ten-year plan for new tinplate mill and other extensions at Port Kembla. Cessation of war-time meat and clothes rationing. High Court declared invalid certain vital sections of Banking Act 1947. Professor Marcus L. Oliphant, F.R.S. accepted appointment as Director of Post-Graduate Research School of Physical Science at Australian National University. Essential Services Act proclaimed in Victoria. Tuberculosis Act assented to. Opening session of Economic Commission for Asia and Far East at Lapstone (N.S.W.). Wheat Industry Stabilization Act repealed 1946 Act. First display of new Australian-made car, the "Holden". Australian Capital Territory Representation Act. International Trade Organization Act (General Agreement on Tariffs and Trade and Havana Charter for International Trade Organization). Nationality and Citizenship Act. Defence (Transitional Provisions) Act. Parliamentary Retiring Allowances Act. National Health Service Act.

1949 Nationality and Citizenship Act operative. First Italian Minister to Australia arrived. Commonwealth to build hostels in Newcastle, Port Kembla, Adelaide and Melbourne to accommodate European migrants expected during next eighteen months. Appointment of Australia's first High Commissioner to Pakistan. Broadcasting Control Board to develop and co-ordinate national and commercial broadcasting services came into operation. Port Moresby decided on as administrative centre for Papua and New Guinea. Full High Court granted an injunction preventing deportation in O'Keefe case (subsequently Acts to provide for removal of certain persons who entered Australia during period of hostilities, and to amend Immigration Act, introduced and assented to). Act providing for placing of New Guinea under international trusteeship and for administrative union of Papua and New Guinea assented to. Certain Australian aborigines for first time granted franchise at Federal elections. Queensland State Parliament electorates increased from 62 to 75, and State divided into four zones. Agreement between Australia and New Zealand for full reciprocity in social service benefits. Prime Minister attended Dominion Prime Ministers' Conference, where India's continuing membership of British Commonwealth of Nations accepted and recognized. Agreement reached on arrangements for increasing meat exports from Australia to United Kingdom (legislation subsequently enacted to provide for assistance for improved roads and other facilities for movement of live-stock in Queensland and Western Australia). Provision in Tasmania for compulsory X-ray examination and treatment of all persons suffering from tuberculosis. Report of British experts on New South Wales transport recommended a transport commission, covering all transport including ferries and intra-state airways, to consider and recommend capital and other extraordinary expenditure and to co-ordinate budgets, and control wages and conditions in the departments covered—buses to replace trams in Newcastle and in Sydney. Invitation to four overseas Universities to establish observatories at Mount Stromlo, Australian Capital Territory. Ratification by Victoria of Murray River Agreement for enlarging of Hume Weir and installation of hydro-electric plant—all Governments concerned have ratified. Commencement of hearing of £10 per week basic wage claim—hearing of claim for interim basic wage increase of £2 per week refused. Appointment of first French Ambassador to Australia. Arrival of H.M.A.S. *Sydney*, Australia's first aircraft carrier. South Africa's first High Commissioner to Australia arrived. High Court declared invalid National Security (Liquid Fuel) Regulations, thus restoring free retailing of petrol. Victorian State and Municipal Authorities to spend

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£46,000,000 in next eight years to expand electricity generation, making it less dependent on black coal. British export's report on Victorian transport system recommended changes in administration and finances of railways, metropolitan tramways and road transport, including the setting-up of a central controlling transport authority. Border River scheme commenced with work on Dumaresq River. Dispute over claims for 35-hour week, 30s. a week wage increase, and long-service leave rendered all Australian black coal mines idle from 27th June until 15th August—transport, power, lighting and gas supplies severely restricted in all States, and much unemployment caused, especially in New South Wales—National Emergency (Coal Strike) Bill enacted, making illegal any kind of payment in support of strike—troops used to extract coal from open-cut mines in New South Wales. Australia accepted agreement of wheat importing nations to purchase 450,000,000 bushels of wheat a year—Australia's share of exports to be 80,000,000 bushels a year. Assent to Act for construction and operation of works for generation of hydro-electric power in Snowy Mountains area for defence purposes and for consumption in Australian Capital Territory, and constituting Snowy Mountains Hydro-electric Authority; subsequently decided that final third of Snowy River waters be diverted to Murray; scheme commenced 17th October. Air transport agreement signed between Australia and India. Legislation passed in New South Wales to increase seats in Legislative Assembly from 90 to 94, to ban press and radio electoral comment for 70 hours preceding close of poll, and virtually to eliminate postal voting in present form. Commonwealth Conciliation and Arbitration Act amended to prevent irregularities in elections for offices in organizations registered under Act. Act providing for establishment of Australian Whaling Commission assented to. Liquid fuel importers required by law to hold stocks at specified places for defence needs. Privy Council dismissed Commonwealth Government's appeal against High Court's invalidation of Commonwealth's bank nationalization legislation. Following report on Finance Ministers Conference in London, Federal Cabinet sub-committee approved 25 per cent. reduction in Australia's imports from dollar areas. Coal Industry Tribunal granted long-service leave to miners throughout Australia—thirteen weeks' leave on full pay after minimum of ten years' service—not to be commenced before June, 1954. First Australian Minister to Italy appointed. Devaluation of sterling against American dollar, and commensurate devaluation of Australian pound to two dollars twenty-four cents. All-Australia Trade Union Congress decision to cancel affiliation with World Federation of Trade Unions. First party of European migrants under International Refugee Organization scheme released from two-year contracts 30th June. Prime Minister announced establishment of Immigration Planning Council to assist in assimilation of migrants into industry and the community. Arrival of first French Ambassador to Australia. Agreement on rail standardization, replacing original agreement of 1946, ratified by Commonwealth and South Australian Governments. Defence (Transitional Provisions) Act 1949 assented to. Dissolution of Eighteenth Australian Parliament. Australia's population reached 8,000,000. Re-introduction of petrol rationing in all States except Tasmania. Fulbright Agreement, providing for exchange of students between Australia and United States of America, signed, thereby liquidating balance of Australia's lend-lease debt to United States. Federal election resulted in defeat of Labour Government by Liberal-Country Parties' coalition.

OFFICIAL YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA,

CHAPTER I.

DISCOVERY, COLONIZATION AND FEDERATION OF AUSTRALIA.

§ 1. Early Knowledge and Discovery of Australia.

1. *Introduction.*—Only a brief summary of the more important facts relating to the early history of Australian discovery is given in this Chapter. A more complete account of this subject, together with bibliographical references thereto, may be found in Official Year Book No. 1 (pp. 45-51), although this account must be modified somewhat in view of later investigations.

2. *Early Tradition.*—It would appear that there was an early Chaldean tradition as to the existence of an Austral land to the south of India. Rumours to that effect in the course of time found their way to Europe, and were probably spread by travellers from Indian seas, more especially by the Greek soldiers who accompanied Alexander the Great (356-323 B.C.) to India. References to this *Terra Australis* are found in the works of Ælianus (A.D. 205-234), Manilius (probably a contemporary of Augustus or Tiberius Cæsar), and Ptolemy (A.D. 107-161). In some of the maps of the first period of the Middle Ages there is evidence which might warrant the supposition of the knowledge of the existence of a *Terra Australis*, while some idea of the Austral land appears in the maps and manuscripts of the fourteenth and fifteenth centuries. But much of the map-drawing in these early days was more or less fanciful, and there is no evidence definitely connecting this so-called *Terra Australis* with Australia.

3. *Discovery of Australia.*—(i) *General.* The Venetian traveller Marco Polo (1254-1324) refers to a land called *Locac*, which through a misunderstanding of his meaning was long thought to be Australia. But Marco Polo knew nothing of any land to the south of Java, and in any case the description given of the so-called *Locac* could not possibly be applied to Australia, as the writer speaks of elephants, etc. On a Mappamundi in the British Museum, of not later date than 1489, there is a coast-line which has been considered to represent the west coast of Australia. Investigation by Wood and others proves this claim to be merely fanciful. Martin Behaim's globe, the oldest known globe extant, constructed in 1492, also shows what purports to be a part of Australia's coast-line, and a globe discovered in Paris bears an inscription to the effect that the *Terra Australis* was discovered in 1499. These also have other countries located in impossible positions. The term *Terra Australis* was, however, also applied to the region now known as *Tierra del Fuego*, hence little weight can be attached to this reference.

In the Dauphin map (about 1530-1536) *Java la Grande* has been supposed by some to represent Australia, but an inspection of the unreal animals and other figures thereon lends no weight to the idea. As a matter of fact, much of this map drawing was simply an attempt to support the old notion that the land surface of the southern hemisphere must balance that of the northern.

(ii) *Arab Expeditions.* It has been stated that the Arabs had come to Australia long before the Portuguese, the Spaniards or the Dutch, but there is no evidence to support the statement.

(iii) *Spanish and Portuguese Expeditions.* The last decade of the fifteenth century and the commencement of the sixteenth saw numerous expeditions equipped in the ports of Spain and Portugal for the purpose of exploiting the new world. The Portuguese rounded the Cape of Good Hope in 1487 and eleven years later pushed eastward to India. The Spaniards, relying on the scientific conclusion that the world was spherical, attempted to get to the East by deliberately starting out west, Magalhaens by so doing reaching the Philippine Islands in 1521.

In 1606 Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group), thought that he had discovered the great land of the south, and therefore named the group *La Australia del Espiritu Santo*. After leaving the New Hebrides, Quiros sailed eastward, but Torres, his second-in-command, took a westerly course and passed through the strait that now bears his name. In all probability he sighted the Australian Continent, but no mention is made of this fact in his records. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

(iv) *Discoveries by the Dutch.* With the decline of Portuguese and Spanish naval supremacy came the opportunity of the Dutch for discovery. Cornelius Wytfliet's map, of which there was an English edition, published in Louvain in 1597, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria. The following oft-quoted passage occurs in Wytfliet's *Descriptionis Ptolemæicæ Augmentum*: "The *Australis Terra* is the most southern of all lands. It is separated from New Guinea by a narrow strait. Its shores are hitherto but little known, since after one voyage and another, that route has been deserted and seldom is the country visited, unless when sailors are driven there by storms. The *Australis Terra* begins at one or two degrees from the equator, and is maintained by some to be so great in extent that, if it were thoroughly explored, it would be regarded as a fifth part of the world." According to Wood this passage has its origin in the voyages through the Straits of Magellan and the discovery of Tierra del Fuego rather than that of Australia.

The Dutch discovered Australia when the Dutch East India Company sent the *Duyfken* from Bantam to explore the islands of New Guinea. During March, 1606 the *Duyfken* coasted along the southern shores of New Guinea, and followed the west coast of Cape York peninsula as far as Cape Keer-Weer ('Turn Again'). Dirk Hartogs (on the plate in the Amsterdam Museum recording his voyage the name is written Dirck Hatichs), in the *Eendracht* in 1616, sailed along a considerable part of the west coast of the continent. It may be mentioned that the route was not definitely selected, but that the navigator simply went farther east than the usual course from the Cape to Java.

In 1618 the *Zeeuwolf* found land in latitude $20^{\circ} 15'$ south, and in the following year Frederik Houtman discovered the reef of the west coast, now known as *Houtman's Abrolhos*.

In 1622 the Dutch vessel *Leeuwin* rounded the Cape, which now bears that name, at the south-west of the continent, and in 1623 the Dutch vessels *Pera* and *Arnhem* discovered Arnhem Land, the peninsula on the western side of the Gulf of Carpentaria, which was so named in compliment to Peter Carpentier, Governor of the Dutch East India Company.

In 1627 Francis Thysz, Commander of the *Gulde Zeepaerd*, with Pieter Nuyts of the Dutch Council of Seventeen on board, coasted along a portion of the shore of the Great Australian Bight. In 1628 De Witt, Commander of the *Vianen*, discovered land on the north-west, namely, in about latitude 21° S. The *Batavia*, commanded by Francis Pelsart, was wrecked on the western coast of Australia in 1629. Pelsart was the first to carry to Europe an authentic account of the west coast of Australia, which, however, he described in the most unfavourable terms. The yachts *Amsterdam* and *Wesel*, under Gerrit Pool, visited the Gulf of Carpentaria in 1636.

Abel Janszoon Tasman, in command of two vessels, the *Heemskerck* and *Zeehan*, set out from Batavia in 1642 to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand and returned to Batavia. In his second voyage in 1644 Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far down as the tropic of Capricorn.

William de Vlamingh landed at the mouth of the Swan River at the end of 1696 and an exploring squadron under Martin Van Delft explored and named part of the north-west coast in 1705, but the period of Dutch discoveries may be said to have ended with Tasman's second voyage, and, with the decline of her maritime power, the Dutch interest in Australian discovery disappeared.

4. Discoveries by the English.—In the meantime the English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier, as supercargo of the *Cygnet*, a trading vessel whose crew had turned buccaneers. In describing the country, Dampier stated that he was certain that it joined neither Asia, Africa nor America. In 1699 he again visited Australia, in command of H.M.S. *Roebuck*, and on his return to England published an account in which a description is given of trees, flowers, birds and reptiles observed, and of encounters with natives.

It was a question at the end of the seventeenth century whether Tasmania and New Zealand were parts of Australia, or whether they were separated from it, but themselves formed part of a great Antarctic Continent. Lieutenant James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Otaheite, had also for its objective to ascertain whether the unexplored part of the southern hemisphere was only an immense mass of water or contained another continent. In command of H.M.S. *Endeavour*, a barque of 370 tons burden, carrying about 85 persons, and accompanied by Sir Joseph Banks, Dr. Solander the naturalist, Green the astronomer, draughtsmen and servants, Cook, after observing the transit of Venus at Otaheite, turned towards New Zealand, sighting that land on 7th October, 1769 in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic Continent nor with Australia, and took formal possession thereof in the name of the British Crown. On 20th April, 1770, at 6 a.m., Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, Botany Bay was discovered on 29th April, 1770. The *Endeavour* dropped anchor and Cook landed on the same day. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until 11th June, 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north, sailing through Torres Strait and anchoring in the Downs on 13th July, 1771. In 1772 Cook was put in command of the ships *Resolution* and *Adventure*, with a view to ascertaining whether a great southern continent existed. Having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on 14th February, 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance was the existence of a channel between Tasmania and Australia. This was made by Flinders and Bass in 1798.

§ 2. The Annexation of Australia.

1. Annexation of Eastern Part of Australia, 1770.—Although representatives of the nations mentioned in the previous section landed or claimed to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until 23rd August, 1770 that the history of Australia was brought into definite political connexion with Western civilization. It was on that date that Captain Cook took possession "of the whole eastern coast, from latitude 38° to this place, latitude 10½° S., in right of His Majesty King George the Third." Cook, however, proclaimed British sovereignty over only what are now the eastern parts of New South Wales and Queensland, and formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26th January, 1788. It was on this last date that Captain Phillip's commission, first issued to him on 12th October, 1786, and amplified on 2nd April, 1787, was read to the people whom he had brought with him in the "First Fleet."

A full historical account of the period referred to may be found in the *Historical Records of New South Wales* Vol. I., parts 1 and 2.

2. **Original Extent of New South Wales.**—The commission appointed Phillip "Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south, and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south."

Although in November, 1769 Captain Cook had taken possession of the North Island of New Zealand, and in January, 1770 also of the South Island, it is a matter of doubt whether, at the time when Captain Phillip's commission was drawn up, New Zealand was considered as one of the "islands adjacent in the Pacific Ocean." The facts that under the Supreme Court Act (Imperial) of 1823 British residents in New Zealand were brought under the jurisdiction of the Court at Sydney, while in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, would leave this an open question, as nothing more than extra-territorial jurisdiction may have been intended. Various hoistings of flags notwithstanding, New Zealand does not appear to have unequivocally become British territory until 1840. In that year, on 29th January, Captain Hobson arrived at the Bay of Islands. On the following day he read the commission, which extended the boundaries of the Colony of New South Wales so as to embrace and comprehend the islands of New Zealand. On 5th February the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on 21st May, British sovereignty over the islands of New Zealand was explicitly proclaimed.

3. **Extension of New South Wales Westward, 1825.**—On 17th February, 1824 Earl Bathurst advised Sir Thomas Brisbane that he had recommended to His Majesty the dispatch of a ship of war to the north-west coast of New Holland for the purpose of taking possession of the coast between the western coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. *Tamar*, who was selected for the purpose, took possession on 20th September, 1824 of the coast from the 135th to the 129th degree of east longitude. On 10th July, 1825 the whole territory between those boundaries was described in Darling's commission as being within the boundaries of New South Wales, thus increasing its area by 518,134 square miles, and making it, including New Zealand and excluding Tasmania, 2,076,308 square miles, or also excluding New Zealand, 1,972,446 square miles.

4. **Annexation of Western Australia, 1827.**—An expedition under Major Lockyer, sent by Lieutenant-General Sir Ralph Darling, then Governor of New South Wales, to found a settlement at King George III. Sound, sailed from Sydney on 6th November, 1826, landed at the Sound on 20th December following, and hoisted the British flag. Captain Stirling, in command of H.M.S. *Success*, arrived at Sydney a few weeks after the departure of the expedition to King George's Sound. He obtained the Governor's permission to visit Swan River with a view to seizing a position on the western coast and reporting upon its suitability as a place of settlement. Captain Stirling left Sydney on 17th January, 1827, and on his return in the following April submitted a glowing report on what he described as a "rich and romantic country," urging its occupation for the purpose of settlement. He left England in July, 1827, continuing his advocacy—withstanding much discouragement—with unabated enthusiasm. He was at last successful, the result being mainly due to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieutenant-Governor and with a party of settlers arrived at Garden Island, near the Swan River, in the ship *Parmelia* in June, 1829. On the 2nd of the preceding month Captain Fremantle, in command of H.M.S. *Challenge*, arrived and hoisted the British flag on the south head of Swan River,

again asserting possession of "all that part of New Holland, which is not included within the territory of New South Wales." Thus, before the middle of 1829, the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

§ 3. The Creation of the Several Colonies.

1. **New South Wales.**—In Governor Phillip's commission of 1786 the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that the present State of Tasmania was actually joined to the mainland, and it was not till 1798 that the contrary was known. In that year, by sailing through Bass Strait, Flinders and Bass proved that it was an island. The territory of New South Wales, as originally constituted, and of New Zealand, which may be included although Cook's annexation was not properly given effect to until 1840, consisted of 1,584,389 square miles. A further area of 518,134 square miles was added in 1825, when the western boundary was extended to the 129th meridian. The territory was subsequently reduced by the separation of various areas to form the other colonies, and at the time of the establishment of the Commonwealth the area of New South Wales was 310,372 square miles.

2. **Tasmania.**—In 1825 Van Diemen's Land, as Tasmania was then called, was politically separated from New South Wales, being constituted a separate colony on 14th June of that year. The area of the colony was 26,215 square miles.

3. **Western Australia.**—The territory westward of the 129th meridian comprising 975,920 square miles was constituted a colony under the name of Western Australia in June, 1829. It was always distinct and independent of New South Wales, though until 1831 the settlement on King George's Sound remained under the latter jurisdiction.

4. **South Australia.**—On 15th August, 1834 the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province," and towards the end of the year 1836 settlement took place. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on 28th December, 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, lying south of the 26th parallel of south latitude, and between the 141st and 132nd meridians of east longitude. On 10th December, 1861, by the authority of the Imperial Act 24 and 25 Vic., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th meridian. The area of the extension was approximately 70,220 square miles. Nearly two years later, on 6th July, 1863, the Northern Territory comprising 523,620 square miles was, by letters patent, brought under the jurisdiction of South Australia, which therefore controlled an area of 903,690 square miles.

5. **New Zealand.**—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales, was, by letters patent of 16th November of that year, constituted a separate colony under the powers of the Act 3 and 4 Vic., cap. 62, of 7th August, 1840. Proclamation of the separation was made on 3rd May, 1841. The area of the colony was 103,862 square miles.

6. **Victoria.**—In 1851 what was known as the "Port Phillip District" of New South Wales was constituted the colony of Victoria, "bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray and thence by the course of that river to the eastern boundary of the colony of South Australia." The area of the new colony was 87,884 square miles, and its separate existence took effect from 1st July, 1851, upon the issuing of the writs for the first election of elective members of the Legislative Council.

7. **Queensland.**—The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony under the name of Queensland by letters patent dated 6th June, 1859, although separation from New South Wales was not consummated until 10th

December of the same year, upon the assumption of office of the first Governor. The territory comprised in the new colony was so much of the colony of New South Wales as lies northwards of a line commencing on the sea-coast at Point Danger in latitude about $28^{\circ} 8'$ south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean. The area of the colony thus constituted was 554,300 square miles. By letters patent dated 13th March, 1861, forwarded by the Colonial Secretary to the Governor of Queensland on 12th April, 1862, the area of Queensland was increased by the annexation of "so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria." With this addition the area of Queensland became 670,500 square miles.

§ 4. Establishment of the Commonwealth of Australia.

1. **General.**—On 1st January, 1901 the colonies mentioned, with the exception of New Zealand, were federated under the name of the "Commonwealth of Australia," the designation of "Colonies"—except in the case of the Northern Territory, to which the designation "Territory" is applied—being at the same time changed into that of "States." The total area of the Commonwealth of Australia is 2,974,581 square miles. The dates of creation and the areas of its component parts, as determined on the final adjustment of their boundaries, are shown below :—

THE COMMONWEALTH OF AUSTRALIA : AREA, ETC., OF COMPONENT PARTS.

State.	Year of Formation into Separate Colony.	Present Area in Square Miles.	State.	Year of Formation into Separate Colony.	Present Area in Square Miles.
New South Wales(a)	1786	310,372	Tasmania ..	1825	26,215
Victoria ..	1851	87,884	Northern Territory	1863	523,620
Queensland ..	1859	670,500	Area of the Commonwealth ..	..	2,974,581
South Australia ..	1834	380,070			
Western Australia	1829	975,920			

(a) Including the Australian Capital Territory embracing an area of 911 square miles, and 28 square miles at Jervis Bay. See par. 3 below.

2. **Transfer of the Northern Territory to the Commonwealth.**—On 7th December, 1907 the Commonwealth and the State of South Australia entered into an agreement for the surrender to and acceptance by the Commonwealth of the Northern Territory, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the Northern Territory Surrender Act 1907 (assented to on 14th May, 1908), and by the Commonwealth Parliament under the Northern Territory Acceptance Act 1910 (assented to on 16th November, 1910). The Territory was formally transferred to the Commonwealth on 1st January, 1911, and became the Northern Territory of Australia.

3. **Transfer of the Australian Capital Territory to the Commonwealth.**—On 18th October, 1909 the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 911 square miles as the seat of Government of the Commonwealth. In December, 1909 Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5th December, 1910 a proclamation was issued vesting the Territory in the Commonwealth on and from 1st January, 1911. By the Jervis Bay

Territory Acceptance Act 1915, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth, and was transferred as from 4th September, 1915.

4. **Transfer of British New Guinea or Papua.**—Under the administration of the Commonwealth, but not included in it, is British New Guinea or Papua, finally annexed by the British Government in 1884. This Territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on 1st September, 1906, under the authority of the Papua Act (Commonwealth) of 16th November, 1905. The area of Papua is about 90,540 square miles.

5. **Transfer of Norfolk Island.**—Although administered for many years by the Government of New South Wales, this Island was a separate Crown Colony until 1st July, 1914, when it was transferred to the Commonwealth under the authority of the Norfolk Island Act 1913. The Island is situated in latitude $29^{\circ} 3' 45''$ S. longitude $167^{\circ} 56' 29''$ E., and comprises an area of 8,528 acres.

6. **Territory of New Guinea.**—In 1919 it was agreed by the Principal Allied and Associated Powers that a mandate should be conferred on Australia for the government of the former German territories and islands situated in latitude between the Equator and 8° S., and in longitude between 141° E. and $159^{\circ} 25'$ E. The mandate was issued by the League of Nations on 17th December, 1920. The Governor-General of the Commonwealth was authorized to accept the mandate by the New Guinea Act 1920, which also declared the area to be a Territory under the authority of the Commonwealth by the name of the Territory of New Guinea. The Territory comprises about 93,000 square miles, and the administration under the mandate dated from 9th May, 1921. New Guinea is now administered under Trusteeship Agreement with the United Nations, approved 13th December, 1946. For further particulars see Chapter X.—The Territories of Australia.

7. **Nauru.**—In 1919 the Governments of the United Kingdom, Australia and New Zealand entered into an agreement to make provision for the exercise of the mandate conferred on the British Empire for the administration of the island of Nauru, and for the mining of the phosphate deposits thereon. The island is situated in longitude 166° E., 26 miles south of the Equator, and comprises about 5,263 acres. The agreement provided that the administration of the island should be vested in an administrator, the first appointment to be made by the Commonwealth Government, and thereafter in such manner as the three Governments decided. The agreement was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and a supplementary agreement of 30th May, 1923, giving the Government immediately responsible for the administration greater powers of control over the Administrator, was approved in 1932. The administration under the mandate has operated from 17th December, 1920, and so far the administrators have been appointed by the Commonwealth Government. As with the Territory of New Guinea, Nauru is now administered under Trusteeship Agreement with the United Nations.

8. **Territory of Ashmore and Cartier Islands.**—By Imperial Order in Council, dated 23rd July, 1931, Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the North-west Coast of Australia, were placed under the authority of the Commonwealth. The Islands were accepted by the Commonwealth in the Ashmore and Cartier Islands Acceptance Act 1933 under the name of the Territory of Ashmore and Cartier Islands and were transferred on 10th May, 1934. The Act authorized the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the 1933 Act, in July, 1938, annexed the Islands to the Northern Territory, whose laws, ordinances and regulations, wherever applicable, thereupon applied.

9. **Australian Antarctic Territory.**—An Imperial Order in Council, dated 7th February, 1933, placed under the authority of the Commonwealth the Antarctic Territories, comprising all the islands and territory, other than Adélie Land, situated south of 60° S. latitude, and lying between 160° E. longitude and 45° E. longitude. The Territory was

accepted by the Commonwealth under the name of the Australian Antarctic Territory in the Australian Antarctic Territory Acceptance Act 1933 which came into force on 24th August, 1936 by proclamation issued by the Governor-General.

§ 5. The Exploration of Australia.

A fairly complete, though brief, account of the exploration of Australia was given in Official Year Book No. 2 (pp. 20-39), and a summary of the more important facts relating to the subject was embodied in this Chapter in succeeding issues up to and including No. 22.

§ 6. The Constitutions of the States and of the Commonwealth.

1. **General.**—Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the Federal movement in Australia, was embodied in this Chapter in issues of the Official Year Book up to No. 22.

2. **Commonwealth Constitution Act.**—The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely: "An Act to constitute the Commonwealth of Australia," as amended by the Constitution Alteration (Senate Elections) 1906, the Constitution Alteration (State Debts) 1909, the Constitution Alteration (State Debts) 1928, and the Constitution Alteration (Social Services) 1946, is given *in extenso* hereunder, and the text contains all the alterations of the Constitution which have been made up to and including 31st December, 1949.

THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT, 63 & 64 VICT., CHAPTER 12.

An Act to constitute the Commonwealth of Australia. [9th July, 1900.]

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established:

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian Colonies and possessions of the Queen:

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.
2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.
3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.
4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.
5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State; and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.

6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.

"The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called "a State."

"Original States" shall mean such States as are parts of the Commonwealth at its establishment.

7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows :—

THE CONSTITUTION.

This Constitution is divided as follows :—

- | | |
|---------|--|
| Chapter | I.—The Parliament : |
| | Part I.—General : |
| | Part II.—The Senate : |
| | Part III.—The House of Representatives : |
| | Part IV.—Both Houses of the Parliament : |
| | Part V.—Powers of the Parliament : |
| Chapter | II.—The Executive Government : |
| Chapter | III.—The Judicature : |
| Chapter | IV.—Finance and Trade : |
| Chapter | V.—The States : |
| Chapter | VI.—New States : |
| Chapter | VII.—Miscellaneous : |
| Chapter | VIII.—Alteration of the Constitution. |
| | The Schedule. |

CHAPTER I.—THE PARLIAMENT.

PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called "The Parliament," or "The Parliament of the Commonwealth."

2. A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State*. The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable: and the places of the senators of the first class shall become vacant at the expiration of [the third year] *three years*,† and the places of those of the second class at the expiration of [the sixth year] *six years*,† from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before*† the places are to become vacant.

* The Parliament has otherwise provided, by means of the Representation Act 1948, that the number of senators shall be ten for each State, from the first meeting of Parliament after the first dissolution of the House of Representatives occurring after the commencement of the Act (18th May, 1948).

† As amended by Section 2 of the Constitution Alteration (Senate Elections) 1906. The words in square brackets have been repealed; amendments are shown in italics.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [January] *July** following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [January] *July** preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth, the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

* As amended by Section 2 of the Constitution Alteration (Senate Elections) 1906. The words in square brackets have been repealed; amendments are shown in italics.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner :—

- (i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators ;
- (ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota ; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section five members at least shall be chosen in each Original State.

25. For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows :—

New South Wales ..	23	|	South Australia ..	6
Victoria ..	20	|	Tasmania ..	5
Queensland ..	8			

Provided that if Western Australia is an Original State, the numbers shall be as follows :—

New South Wales ..	26	|	South Australia ..	7
Victoria ..	23	|	Western Australia ..	5
Queensland ..	9	|	Tasmania ..	5

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provision, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State ; but in the choosing of members each elector shall vote only once.*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

* The Parliament has otherwise provided, by means of the Commonwealth Electoral Act 1918-1934 Section 35 (repealing an earlier provision made by the Commonwealth Franchise Act 1902).

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows :—

- (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen :
- (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

- (i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power : or
- (ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer : or
- (iii) Is an undischarged bankrupt or insolvent : or
- (iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth : or

- (v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons :

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section iv. does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

45. If a senator or member of the House of Representatives—

- (i) Becomes subject to any of the disabilities mentioned in the last preceding section : or
- (ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors : or
- (iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State :

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House, shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.*

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

- (i) The mode in which its powers, privileges, and immunities may be exercised and upheld :
- (ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

* The Parliamentary allowance was raised to £600 per annum in 1907 and to £1,000 per annum in 1920, but in the case of Ministers, the Presiding Officers of the two Houses, and the Chairmen of Committees, the allowance, in addition to the emoluments of office, was fixed at £400 per annum in 1907 and at £800 per annum in 1920. Several reductions under financial emergency legislation reduced the Parliamentary allowance to £750 per annum in 1932, but it was gradually restored to £1,000, the last reduction being removed in May, 1938, when the proviso for the reduced allowance payable, in addition to the emoluments of office, to holders of Parliamentary Office was also omitted. In June, 1947, the Parliamentary allowance was increased to £1,500 per annum, and at the same time the additional allowance (1920) of £200 per annum to the Leader of the Opposition in the Senate and of £100 per annum to the Leader of the Opposition in the House of Representatives were increased to £300 and £200 per annum respectively. In December, 1947 the Parliamentary Allowances Act was amended to provide for an additional allowance of £400 per annum to the Leader in the House of Representatives, other than the Leader of the Opposition, of a recognized political party, of which not less than ten members are members of the House of Representatives, and of which no member is a Minister of State.

PART V.—POWERS OF THE PARLIAMENT.*

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to—

- (i) Trade and commerce with other countries, and among the States :
- (ii) Taxation ; but so as not to discriminate between States or parts of States :
- (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth :
- (iv) Borrowing money on the public credit of the Commonwealth :
- (v) Postal, telegraphic, telephonic, and other like services :
- (vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth :
- (vii) Lighthouses, lightships, beacons and buoys :
- (viii) Astronomical and meteorological observations :
- (ix) Quarantine :
- (x) Fisheries in Australian waters beyond territorial limits :
- (xi) Census and statistics :
- (xii) Currency, coinage, and legal tender :
- (xiii) Banking, other than State banking ; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money :
- (xiv) Insurance, other than State insurance ; also State insurance extending beyond the limits of the State concerned :
- (xv) Weights and measures :
- (xvi) Bills of exchange and promissory notes :
- (xvii) Bankruptcy and insolvency :
- (xviii) Copyrights, patents of inventions and designs, and trade marks :
- (xix) Naturalization and aliens :
- (xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth :
- (xxi) Marriage :
- (xxii) Divorce and matrimonial causes ; and in relation thereto, parental rights, and the custody and guardianship of infants :
- (xxiii) Invalid and old-age pensions :
- (xxiiiA) †*The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances :*
- (xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States :
- (xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States :
- (xxvi) The people of any race, other than the aboriginal race in any State, for whom it is deemed necessary to make special laws :
- (xxvii) Immigration and emigration :
- (xxviii) The influx of criminals :
- (xxix) External affairs :
- (xxx) The relations of the Commonwealth with the islands of the Pacific :
- (xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws :
- (xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth :
- (xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State :

* Particulars of proposed laws which were submitted to referenda are referred to in Chapter III., General Government.

† Under Section 2 of the Constitution Alteration (Social Services) 1946, the Constitution was amended by the insertion of this paragraph.

- (xxxiv) Railway construction and extension in any State with the consent of that State :
- (xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State :
- (xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides :
- (xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law :
- (xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia :
- (xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.

52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth with respect to—

- (i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes :
- (ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth :
- (iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed laws so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provision therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only ; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.*

66. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.*

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth :—

Posts, telegraphs, and telephones :	Lighthouses, lightships, beacons, and buoys :
Naval and military defence :	Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.†

72. The Justices of the High Court and of the other Courts created by the Parliament—

(i) Shall be appointed by the Governor-General in Council :

(ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity :

(iii) Shall receive such remuneration as the Parliament may fix ; but the remuneration shall not be diminished during their continuance in office.‡

* The Ministers of State were increased in 1915 to eight, in 1917 to nine, in 1935 to ten, in 1938 to eleven, and in 1941, as a special provision during the war, to nineteen. A sum of £1,650 was added to the annual appropriation for Ministers' salaries for each additional Minister and £800 per annum was allowed each Minister by the Parliamentary Allowances Act 1920 (increased from £400 per annum in 1907). Reductions under financial emergency legislation reached their maximum in 1932, when Ministers' salaries were reduced by 30 per cent. and their allowances as members by 25 per cent.; the reductions were gradually removed, finally in May, 1938, by the Parliamentary Salaries Adjustment Act 1938. This Act also made provision for an additional allowance of £1,500 per annum to the Prime Minister, and omitted the proviso relating to the reduced Parliamentary allowance payable to Ministers. The Ministers of State Act 1941 made provision for the salaries of Ministers, the appropriation, excluding the Prime Minister's allowance, not to exceed £21,250. The Ministers of State Act 1935-1946 extended into peace-time the war-time special provision as to the number and salaries of Ministers and the Ministers of State Act 1947 increased the appropriation for Ministers' salaries to £27,650.

† The Judiciary Act 1903 provided for a Chief Justice and two other Justices. Subsequent amendments to the Act increased the number of other Justices to four and six, and then reduced it to five. The Judiciary Act 1946 again increased it to six. The Judiciary Act 1903 also provided for the payment of a salary of £3,500 per annum to the Chief Justice and of £3,000 per annum to each other Justice. The Salaries (Statutory Offices) Adjustment Act 1947 increased these salaries respectively to £4,500 and £4,000 per annum.

73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

- (i) Of any Justice or Justices exercising the original jurisdiction of the High Court :
- (ii) Of any other federal court, or court exercising federal jurisdiction ; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council :
- (iii) Of the Inter-State Commission, but as to questions of law only :

and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits *inter se* of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits *inter se* of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

75. In all matters—

- (i) Arising under any treaty :
- (ii) Affecting consuls or other representatives of other countries :
- (iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party :
- (iv) Between States, or between residents of different States, or between a State and a resident of another State :
- (v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth :

the High Court shall have original jurisdiction.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

- (i) Arising under this Constitution, or involving its interpretation :
- (ii) Arising under any laws made by the Parliament :
- (iii) Of Admiralty and maritime jurisdiction :
- (iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

- (i) Defining the jurisdiction of any federal court other than the High Court :
- (ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States :
- (iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

- (i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary;
- (ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as

may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth :

- (iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section ; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament :
- (iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

- (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State—
 - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth ;
 - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides—

- (i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State :
- (ii) Subject to the last sub-section, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an Original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth : and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State ; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But

no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

103. The members of the Inter-State Commission—

(i) Shall be appointed by the Governor-General in Council :

(ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity :

(iii) Shall receive such remuneration as the Parliament may fix ; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],* or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof ; and the State shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

105A.† (i) *The Commonwealth may make agreements with the States with respect to the public debts of the States, including—*

(a) *the taking over of such debts by the Commonwealth ;*

(b) *the management of such debts ;*

(c) *the payment of interest and the provision and management of sinking funds in respect of such debts ;*

(d) *the consolidation, renewal, conversion, and redemption of such debts ;*

(e) *the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth ; and*

(f) *the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.*

(ii) *The Parliament may make laws for validating any such agreement made before the commencement of this section.*

(iii) *The Parliament may make laws for the carrying out by the parties thereto of any such agreement.*

(iv) *Any such agreement may be varied or rescinded by the parties thereto.*

(v) *Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto notwithstanding anything contained in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.*

(vi) *The powers conferred by this section shall not be construed as being limited in any way by the provisions of section one hundred and five of this Constitution.*

CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

* Under Section 2 of the Constitution Alteration (State Debts) 1909, the words in square brackets are omitted.

† Under Section 2 of the Constitution Alteration (State Debts) 1928, the Constitution was amended by the insertion of this section.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

CHAPTER VII.—MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.

CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner :—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

SCHEDULE.

OATH.

I, A.B., do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. So HELP ME GOD !

AFFIRMATION.

I, A.B., do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE.—*The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

3. **The Royal Proclamation.**—The preceding Act received the Royal assent on the 9th July, 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on the 17th September, 1900, constituted the Commonwealth as from the 1st January, 1901 ; it reads as follows :—

BY THE QUEEN.

A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of *Australia*," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales, Victoria, South Australia, Queensland, and Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales, Victoria, South Australia, Queensland, Tasmania, and Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

CHAPTER II.

PHYSIOGRAPHY.

§ 1. General Description of Australia.

1. *Geographical Position.*—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes $113^{\circ} 9' \text{ E.}$ and $153^{\circ} 39' \text{ E.}$, while its northern and southern limits are the parallels of latitude $10^{\circ} 41' \text{ S.}$ and $39^{\circ} 8' \text{ S.}$, or, including Tasmania, $43^{\circ} 39' \text{ S.}$ On its north are the Timor and Arafura Seas and Torres Strait—on its south the Southern Ocean and Bass Strait. The extreme points are “Steep Point” on the west, “Cape Byron” on the east, “Cape York” on the north, “Wilson’s Promontory” on the south, or, if Tasmania be included, “South-East Cape.”

(ii) *Tropical and Temperate Regions.* Of the total area of Australia nearly 40 per cent. lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is $23^{\circ} 30' \text{ S.}$ (its mean value for 1949 was $23^{\circ} 26' 45.30''$), the areas within the tropical and temperate zones are approximately as follows:—

AUSTRALIA : AREAS OF TROPICAL AND TEMPERATE REGIONS.

Area.	N.S.W. (a)	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N. Terr.	Total.
Within Tropical Zone sq. miles	..	..	359,000	..	364,000	..	426,320	1,149,320
Within Temperate Zone sq. miles	310,372	87,884	311,500	380,070	611,920	26,215	97,300	1,825,261
Total Area sq. miles	310,372	87,884	670,500	380,070	975,920	26,215	523,620	2,974,581
Ratio of Tropical part to whole State .. ..	..	..	0.535	..	0.373	..	0.814	0.386
Ratio of Temperate part to whole State	I	I	0.465	I	0.627	I	0.186	0.614

(a) Includes Australian Capital Territory.

Thus the tropical part is roughly about five-thirteenths of the whole of Australia (0.386) or, of the three territories with areas within the tropical zone, about one-half (0.530).

2. *Area of Australia compared with Areas of other Countries.*—The area of Australia is almost as great as that of the United States of America, four-fifths of that of Canada, more than one-fifth of the area of the British Commonwealth, nearly three-fourths of the whole area of Europe, and about 25 times as large as Great Britain and

Ireland. This great area, coupled with a limited population, renders the solution of the problem of Australian development a particularly difficult one. The areas of Australia and of certain other countries are shown in the following table :—

AREA OF AUSTRALIA AND OF OTHER COUNTRIES, *Circa 1947.*

Country.	Area.	Country.	Area.
Continental Divisions—	Sq. miles.	Africa—continued.	sq. miles.
Europe (a)	1,913,000	Angola	481,000
Asia (a)	10,349,000	Union of South Africa ..	472,000
U.S.S.R. (Europe and Asia)	8,599,000	Egypt	386,000
Africa	11,620,000	Nigeria and Protectorate ..	373,000
North and Central America		Tanganyika Territory ..	363,000
and West Indies ..	8,666,000	Ethiopia	350,000
South America	6,927,000	South-West Africa ..	318,000
Oceania, etc.	3,305,000	Mozambique	298,000
Total, excluding Arctic		Northern Rhodesia ..	290,000
and Antarctic Conts.	51,379,000	Bechuanaland Protectorate	275,000
		Madagascar	229,000
Europe(a)—		Kenya Colony and Protec-	
France	213,000	torate	225,000
Spain (incl. possessions) ..	195,000	Other	1,384,000
Sweden	173,000	Total	11,620,000
Germany	138,000		
Finland	130,000	North and Central America—	
Norway	125,000	Canada	3,690,000
Poland	120,000	United States of America ..	3,022,000
Italy	116,000	Mexico	760,000
Yugoslavia	99,000	Alaska	586,000
United Kingdom	94,000	Newfoundland and Labra-	
Rumania	92,000	dor	153,000
Other	418,000	Nicaragua	59,000
Total	1,913,000	Honduras	57,000
		Other	339,000
Asia(a)—		Total	8,666,000
China and Dependencies ..	3,750,000		
India	1,220,000	South America—	
Indonesia(b)	735,000	Brazil	3,288,000
Iran	628,000	Argentine Republic ..	1,079,000
Mongolian Peoples' Republic	626,000	Peru	482,000
Saudi Arabia	597,000	Colombia (excl. of Panama)	449,000
Pakistan	361,000	Bolivia	415,000
Turkey	287,000	Venezuela	352,000
French Indo-China ..	272,000	Chile	286,000
Burma	262,000	Ecuador	176,000
Afghanistan	251,000	Paraguay	157,000
Siam	198,000	Other	262,000
Other	1,153,000	Total	6,927,000
Total	10,349,000		
U.S.S.R.	8,599,000	Oceania, etc.—	
		Commonwealth of Australia	2,975,000
Africa—		New Zealand and Depen-	
French West Africa ..	1,805,000	dencies	104,000
French Equatorial Africa ..	969,000	New Guinea	93,000
Anglo-Egyptian Sudan ..	967,000	Papua	91,000
Belgian Congo	905,000	Other	42,000
Algeria	851,000	Total	3,305,000
Libya	679,000	British Commonwealth	13,258,000

(a) Excludes U.S.S.R., shown below.

(b) Includes Dutch New Guinea.

The countries and areas shown in the table are obtained from the *Demographic Yearbook*, 1948, published by the United Nations.

3. Areas of Political Subdivisions.—As already stated, Australia consists of six States and the Northern and Australian Capital Territories. The areas of these, and their proportions of the total of Australia, are shown in the following table:—

AUSTRALIA : AREA OF STATES AND TERRITORIES.

State or Territory.			Area.	Percentage on Total.
			Sq. miles.	%
New South Wales	..	..	309,433	10.40
Victoria	..	..	87,884	2.96
Queensland	..	..	670,500	22.54
South Australia	..	..	380,070	12.78
Western Australia	..	..	975,920	32.81
Tasmania	..	..	26,215	0.88
Northern Territory	..	..	523,620	17.60
Australian Capital Territory	..	..	939	0.03
Total	..	..	2,974,581	100.00

4. Coastal Configuration—(i) *General*. There are no striking features in the configuration of the coast; the most remarkable indentations are the Gulf of Carpentaria on the north and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Official Year Book No. 1 an enumeration is given of the features of the coast-line of Australia (see pp. 60–68).

(ii) *Coast-line*. The lengths of coast-line, excluding minor indentations, of each State and of the whole continent, and the area per mile of coast-line, are shown in the following table:—

AUSTRALIA : COAST-LINE AND AREA PER MILE THEREOF.

State.	Coast-line.	Area per Mile of Coast-line.	State.	Coast-line.	Area per Mile of Coast-line.
	Miles.	Sq. miles.		Miles.	Sq. miles.
New South Wales(a)	700	443	Western Australia	4,350	224
Victoria..	680	129	Northern Territory	1,040	503
Queensland	3,000	223	Continent (b)	11,310	261
South Australia	1,540	247	Tasmania	900	29

(a) Includes Australian Capital Territory.

(b) Area 2,948,366 square miles.

For the entire Commonwealth of Australia this gives a coast-line of 12,210 miles and an average of 244 square miles for one mile of coast-line. According to Strelbitski, Europe has only 75 square miles of area to each mile of coast-line, and, according to more recent figures, England and Wales have only one-third of this, 25 square miles.

(iii) *Historical Significance of Coastal Names*. It is interesting to trace the voyages of some of the early navigators by the names bestowed by them on various coastal features—thus Dutch names are found on various points of the Western Australian coast, in Nuyts' Archipelago, in the Northern Territory, and in the Gulf of Carpentaria; Captain Cook can be followed along the coasts of New South Wales and Queensland; Flinders' track is easily recognized from Sydney southwards, as far as Cape Catastrophe, by the numerous Lincolnshire names bestowed by him; and the French navigators of the end of the eighteenth and the beginning of the nineteenth century have left their names all along the Western Australian, South Australian and Tasmanian coasts.

5. *Geographical Features of Australia*.—In separate issues of earlier Official Year Books fairly complete information has been given concerning some special geographical element. The nature of this information and its position in the various issues can be readily ascertained on reference to the special index following the index to maps and graphs at the end of this issue.

6. **Fauna, Flora, Geology and Seismology of Australia.**—Special articles dealing with these features have appeared in previous issues of the Official Year Book, but limits of space naturally preclude their repetition in each volume. As pointed out in par. 5, however, the nature and position of these articles can be readily ascertained from the special index.

§ 2. Climate and Meteorology of Australia.*

1. **Introductory.**—In Official Year Book No. 3, pp. 79 and 80, some account is given of the history of Australian meteorology, including a reference to the development of magnetic observations. In Official Year Book No. 4, pp. 84 and 87, will be found a short sketch of the creation and organization of the Commonwealth Bureau of Meteorology, and a résumé of the subjects dealt with at the Meteorological Conference in 1907.

2. **Organization of the Meteorological Service.**—The Meteorological Branch is organized with a head-quarters' staff at the Central Meteorological Bureau, Melbourne, and Divisional Meteorological Bureaux at Adelaide, Brisbane, Hobart, Sydney, and Perth. Aviation services are provided by Forecasting and Observer Stations at the main terminals and at staging stations along the national air routes. At international airports, forecasting stations, working to agreed procedures, maintain integrated services with the staging stations in adjoining territories.

The Central Meteorological Bureau is organized in specializing sections, which include :—

- (i) *Aviation and Transport Section.*—For the administration and supervision of Aviation Meteorological Offices at Royal Australian Air Force and civil aerodromes.
- (ii) *Climatological and Statistical Section.*—For the organization of the climatological network of the Commonwealth, and the receipt and compilation of climatological statistics for a wide variety of purposes. These are applied to departmental, public, economic, and scientific purposes by the climatologists of the Section in the form of publications and special papers issued from time to time.
- (iii) *Central Analysis and Weather Development Section.*—For the preparation of analyses and advisory statements (distributed daily amongst all meteorological offices in the Commonwealth, and transmitted overseas for the benefit of International Meteorological Services), and the development of practising procedures for the application of new meteorological theories and techniques as they arise.
- (iv) *Training and Publications Section.*—For the organization and supervision of all training activities throughout the Meteorological Service, and the editing, collation and publication of Meteorological manuals, pamphlets, and papers. In addition, this Section attends to the meteorological training of Civil Aviation pilots, and to the associated examinations for promotion within the Australian Aviation Services.
- (v) *Special Investigations Section.*—For investigation of problems referred by departmental and public interests, and for the preparation of reports on special aspects in applied meteorology.
- (vi) *Seasonal Forecasting Research Section.*—For investigation of methods and techniques for extended range forecasting.
- (vii) *Works and Laboratory.*—For the design, specification, maintenance and repair of meteorological equipment and supplies.
- (viii) *Administrative Section.*—For the general administration of the Departmental Services.

Divisional Bureaux in the capital cities of the various States are responsible for the administration of Meteorological and Climatological Services within the region of the State, and provide all necessary forecasting and advisory services for the public and other interests and attend to climatological problems in respect of the region which they control.

The Aviation Service, co-ordinated by the Aviation Section at Central Office, is responsible for all meteorological services required for aviation over the routes and route sections of the regions in which they are located.

* Prepared from data supplied by the Director, Commonwealth Meteorological Bureau.

3. **Meteorological Publications.**—Reference to publications issued by the Central Meteorological Bureau appears in Official Year Book No. 22, pp. 40 and 41, and No. 34, p. 11. The following publications have since been issued:—Bulletin No. 28, "Duststorms in Australia"; Bulletin No. 29, "Report on the Divergence Theory of the Formation of Cyclones"; Bulletin No. 30, "Synoptic Analysis over South-West Pacific Area"; Bulletin No. 31, "Coastal Fogs in Australia"; Bulletin No. 32, "Frost in the Australian Region"; Bulletin No. 33, "Discussion of Seven Years of Aerological Observations by Aeroplane at Sydney"; Bulletin No. 34, "Bradfield Scheme for Watering the Inland"; Bulletin No. 35, "A Study of Average Hourly Values of Temperature, Relative Humidity and Saturation Deficit in the Australian Region from Records of Capital City Bureaux"; Bulletin No. 36, "Weather Conditions Affecting Aviation over the Tasman Sea"—Part IV., "Flying Conditions over the Tasman Sea" (1940-44); Bulletin No. 37, "Discussion of Four Years of Aerological Observations obtained by means of Aeroplanes near Perth"; Studies in Applied Climatology, Western Australia—Pamphlet No. 1, "Climate of the West Australian Wheat Belt with Special Reference to Rainfall over Marginal Areas"; Pamphlet No. 2, "Climate of the South-West Wheat Belt of New South Wales"; Bulletin No. 40, "Meteorology of the Indian Ocean Area between Australia and India"; "Analysis and Forecasting in the South-West Pacific Area"; and "Set of Typical Summer and Winter Weather Charts (for use in Schools)".

4. **Equipment.**—The determination of the climatological data has been made by records of the following instruments:—

- (i) *Rainfall.* Rainfall has been measured by a cylindrical gauge generally 8 inches in diameter.
- (ii) *Temperature.* Extreme daily temperatures have been recorded by means of self-registering maximum and minimum thermometers which are read and set daily.
- (iii) *Humidity.* Humidities have been determined by the aid of tables from readings of dry and wet bulb thermometers.
- (iv) *Atmospheric Pressure.* Pressures have been measured by mercurial barometers of the Kew (or Fortin) pattern.
- (v) *Evaporation.* The standard evaporimeter in use consists of a cylindrical galvanized iron tank 3 feet in diameter and 3 feet deep, with a water jacket. Concrete tanks of similar form and dimensions are also used.
- (vi) *Wind.* Data concerning wind have been obtained either by "Robinson" cup anemometer, "Dines" pressure tube anemometer or by "Machin" cup anemometer.

5. **General Description of Australia.**—A considerable portion (0.530) of three divisions of Australia is north of the tropic of Capricorn—that is to say, within Queensland, Western Australia and the Northern Territory, no less than 1,149,320 square miles belong to the tropical zone and 1,020,720 to the temperate zone. The whole area of Australia within the temperate zone, however, is 1,825,261 square miles; thus the tropical part is about 0.386, or about five-thirteenths of the whole, or the "temperate" region is half as large again as the "tropical" (more accurately 1.588). By reason of its insular geographical position and the absence of striking physical features whether in marine gulfs or in important mountains, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe, and latitude for latitude Australia is, on the whole, more temperate.

The average elevation of the surface of the land is low, probably close to 900 feet above the sea. The altitudes range up to a little over 7,300 feet, hence its climate embraces a great many features, from the characteristically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the Great Dividing Range.

On the coast, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior is very limited, and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are large areas also which are treeless, and here the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character. Climatologically, therefore, Australia may be said to present a great variety of features.

6. **Meteorological Divisions.**—Reference to the divisions adopted by the Commonwealth Meteorologist will be found in Official Year Book No. 22, p. 41.

7. **Temperature.**—(i) *Effective Temperature.* When a meteorologist speaks of temperature he means the temperature of the air indicated by a thermometer sheltered from precipitation, from direct rays of the sun and from radiation of heat from the ground and neighbouring objects, yet freely exposed to the circulation of the air. In other words, he means temperature measured under conditions standardized as near as possible in a Stevenson Screen, which is the standard housing for meteorological thermometers.

This shade temperature as measured by a "dry bulb" thermometer shows only the actual temperature experienced by dry inorganic substances, not the *sensible* temperatures felt by organic bodies. In the case of human beings, sensible temperature is affected by the rate of conduction of heat to or from the body by moving air and also by the rate of cooling due to evaporation from the skin and respiratory passages. The wind and humidity therefore determine the sensible temperature.

The humidity (relative humidity) is determined from the readings of the dry and wet bulb thermometers. Of late years, however, with increasing interest in human comfort in tropical climates, another term, *effective* temperature, has come into use. It may be defined as "the temperature of a still, saturated atmosphere which would on the average produce the same feeling of warmth or cold as the atmosphere in question".*

Later investigations have established "comfort zones"† bounded by limits of effective temperature within which people will feel comfortable. American research workers have determined the following figures :—‡

COMFORT ZONES : EFFECTIVE TEMPERATURES.

Season.				No subjects feel comfortable below—	Fifty per cent. of subjects feel comfortable between—	No subjects feel comfortable above—
Winter	..	..	..	60° F.	63° and 71° F.	74° F.
Summer	..	..	..	64° F.	66° and 75° F.	79° F.

Isotherms of effective temperature (not corrected for altitude) have been determined for Australia.§ A map showing effective temperature for Australia for January (9 a.m.) will be found on page 33.

It will be seen that the 80° F. isotherm is confined to a very narrow tract of country on the north-west coast of Western Australia. The 75° F. isotherm extends broadly from Onslow on the north-west coast of Western Australia to Daly Waters to Camooweal to Moreton in Cape York Peninsula following in a general way the coastline of Northern Australia but from 100 to 300 miles inland.

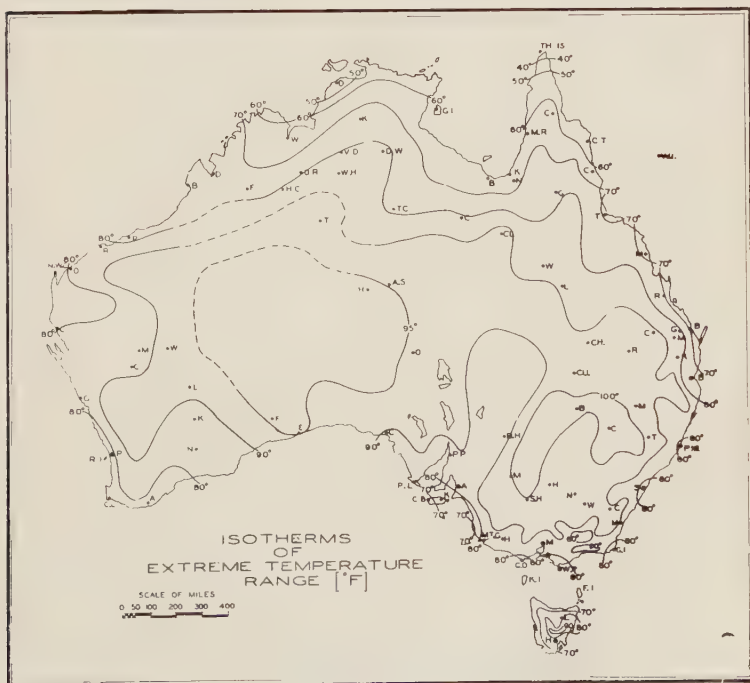
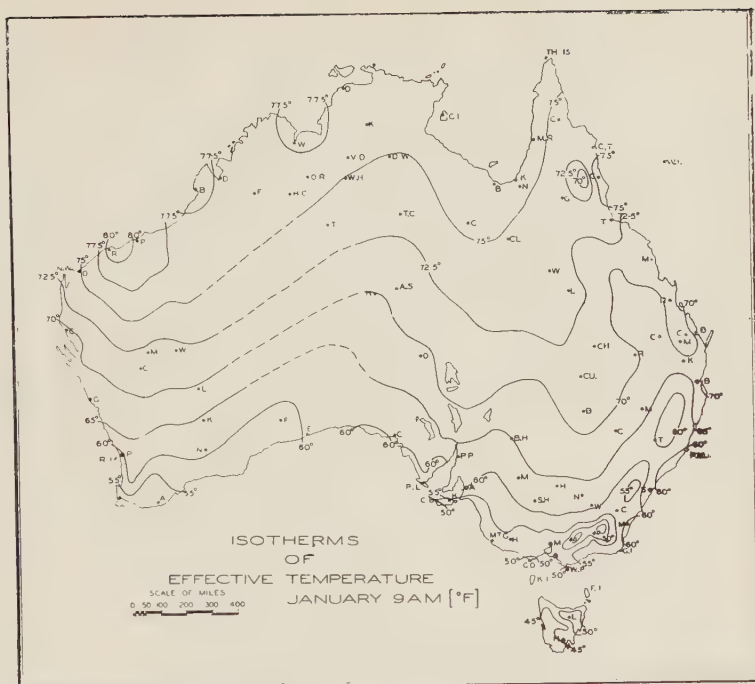
Queensland investigators¶ in recent years have divided some towns of Queensland into three classes on the basis of deviation from comfort :—

Class 1 (Sub-tropics).—Quite suitable for Caucasian habitation—Rockhampton, Bundaberg, Brisbane, Longreach, Charleville.

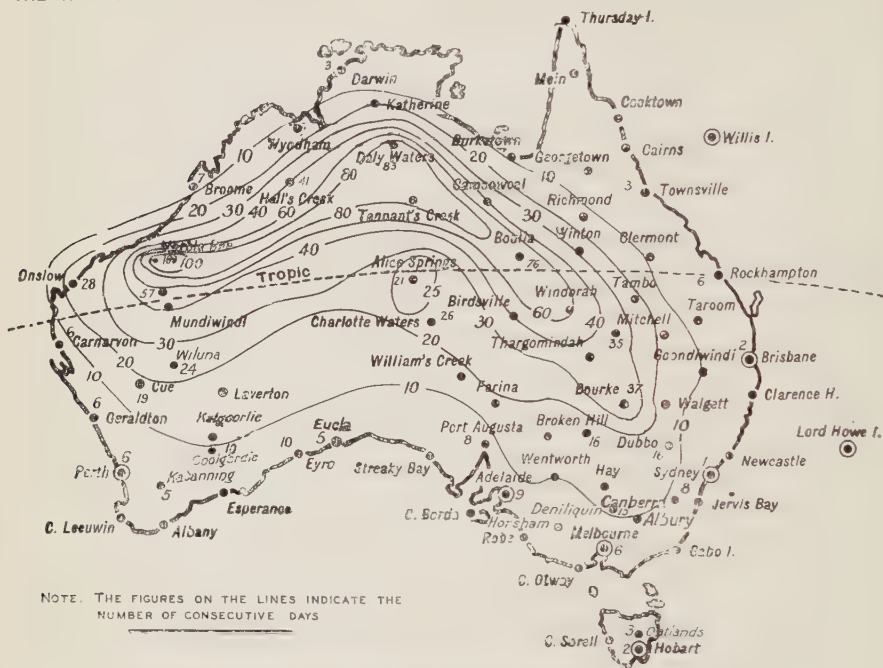
Class 2 (Marginal tropics).—Suitable for Caucasian habitation, but requires adaptation in summer—Mackay, Townsville.

Class 3 (Tropics).—(a) Permissible for Caucasian habitation but requires selection and marked adaptation—Cardwell, Cairns, Cloncurry. (b) Not suitable for continuous Caucasian habitation—Cape York, Burketown.

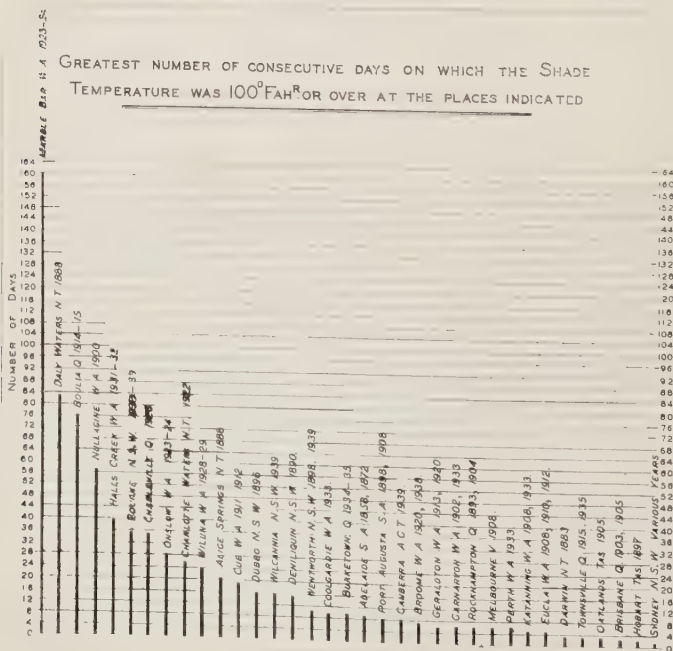
* Houghton, F. C., Teague, W. W. and Miller, W. E. (1926) Amer. Soc. Heat. Vent. Engns.
 † Yaglou, C. P. (1926) J. Industr. Hyg. ‡ Yaglou, C. P. (1927) Ibid. § Hounam, C. E.
 Effective Temp. Data, C.W.B. unpublished. ¶ Lee, D. H. K. Trans. Roy. Soc. Trop. Med. and Hyg.
 (1940) Vol. XXXII.



AREA AFFECTED AND PERIOD OF DURATION OF THE LONGEST HEAT WAVES WHEN THE MAXIMUM TEMPERATURE FOR CONSECUTIVE 24 HOURS REACHED OR EXCEEDED 100°F.



NOTE. THE FIGURES ON THE LINES INDICATE THE NUMBER OF CONSECUTIVE DAYS





REFERENCE TO DISTRICTS

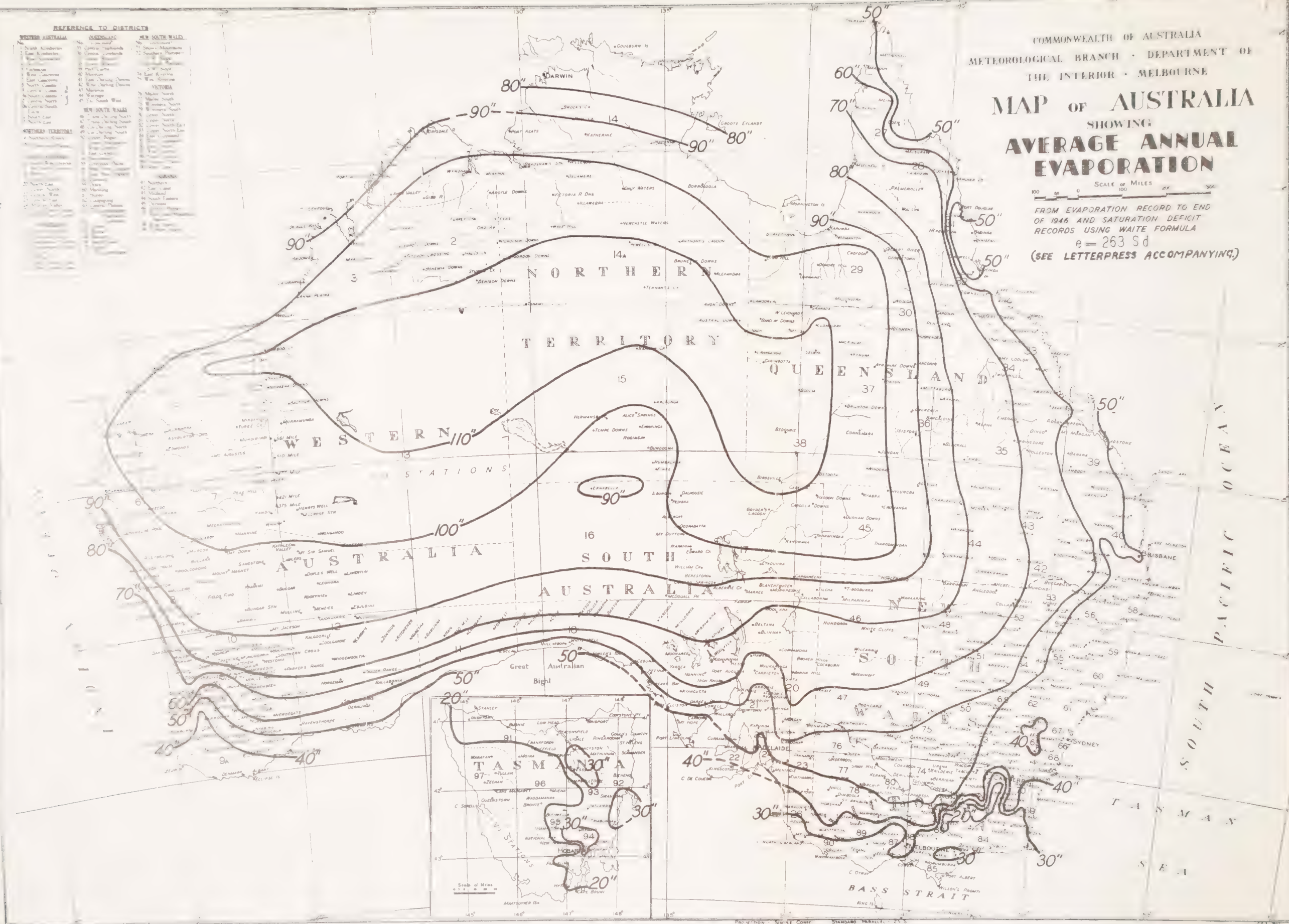
WESTERN AUSTRALIA	SOUTHERN AUSTRALIA	NORTH AUSTRALIA
1. Perth	1. Adelaide	1. Darwin
2. Fremantle	2. Melbourne	2. Alice Springs
3. Geraldton	3. Sydney	3. Tennant Creek
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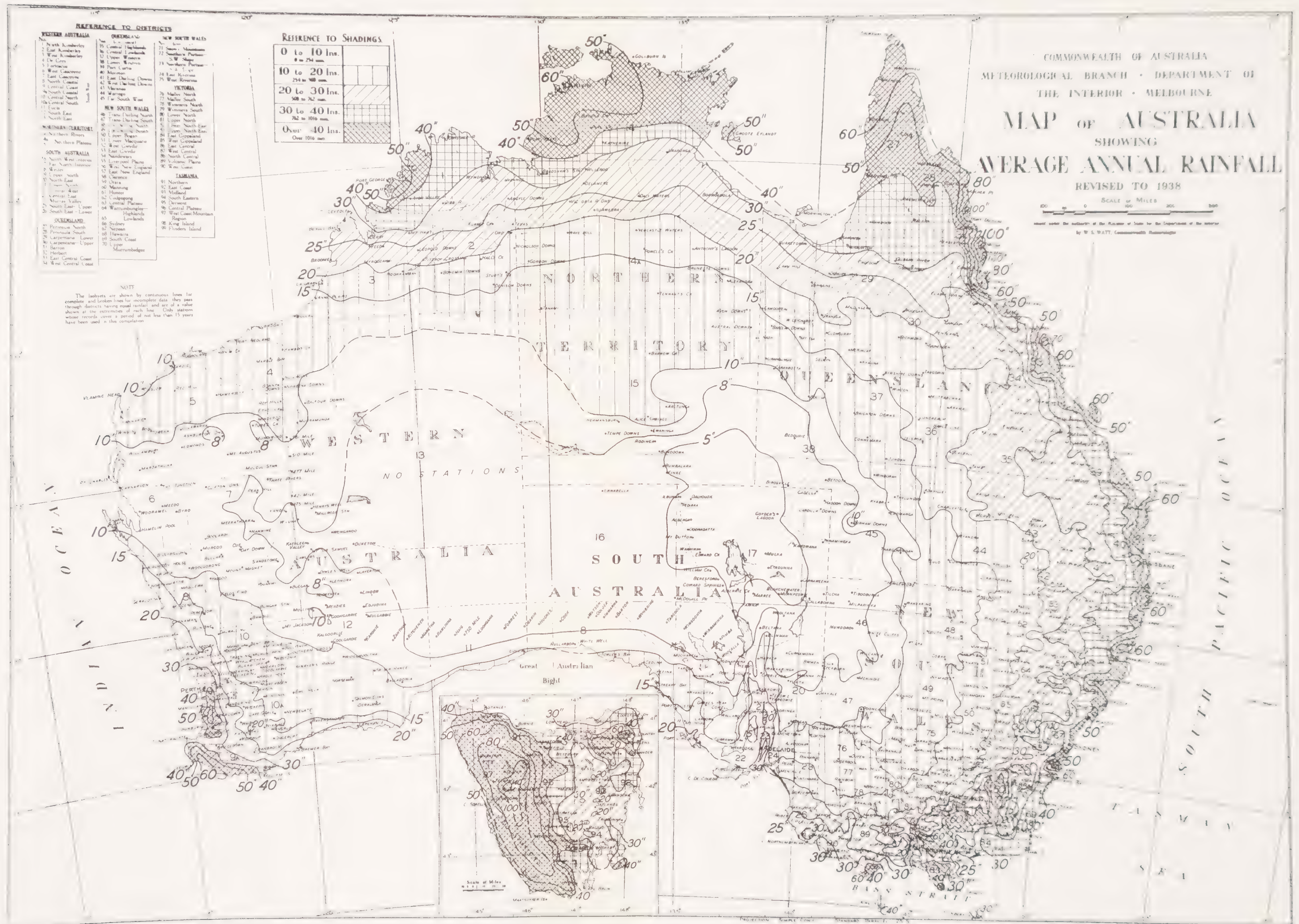
COMMONWEALTH OF AUSTRALIA
METEOROLOGICAL BRANCH · DEPARTMENT OF
THE INTERIOR · MELBOURNE

MAP of AUSTRALIA SHOWING AVERAGE ANNUAL EVAPORATION

SCALE OF MILES
100 0 100

FROM EVAPORATION RECORD TO END
OF 1946 AND SATURATION DEFICIT
RECORDS USING WAITE FORMULA
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(SEE LETTERPRESS ACCOMPANYING.)





COMMONWEALTH OF AUSTRALIA.
BUREAU OF METEOROLOGY MELBOURNE.
MONTHLY DISTRIBUTION OF RAINFALL
OVER AUSTRALIA.

REVISED TO END OF 1939.

BY THE MINISTER OF STATE FOR THE AIR BY

H. N. WARREN
DIRECTOR

SCALE OF MILES
0 50 100 200

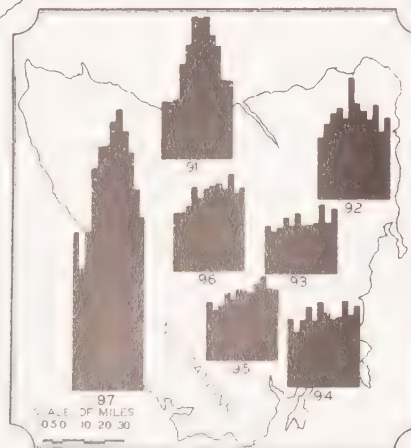
EXPLANATION. THE GRAPHS SHOW THE AVERAGE RAINFALL IN EACH MONTH OF THE YEAR IN THE VARIOUS RAINFALL DISTRICTS, THE BOUNDARIES OF WHICH ARE SHOWN BY THE BROKEN LINES ON THE MAP. THE NUMBERS ON THE MAP REFER TO THE DISTRICTS. THE CORRESPONDING DISTRICT NAMES ARE GIVEN IN THE INSERT ON PAGE 37.

THE COLUMNS FOR THE SUCCESSIVE MONTHS, JANUARY TO DECEMBER, RUN FROM LEFT TO RIGHT.

THE LENGTH OF A VERTICAL COLUMN REPRESENTS THE AVERAGE MONTHLY RAINFALL ACCORDING TO THE SCALE GIVEN BELOW.



NO STATIONS

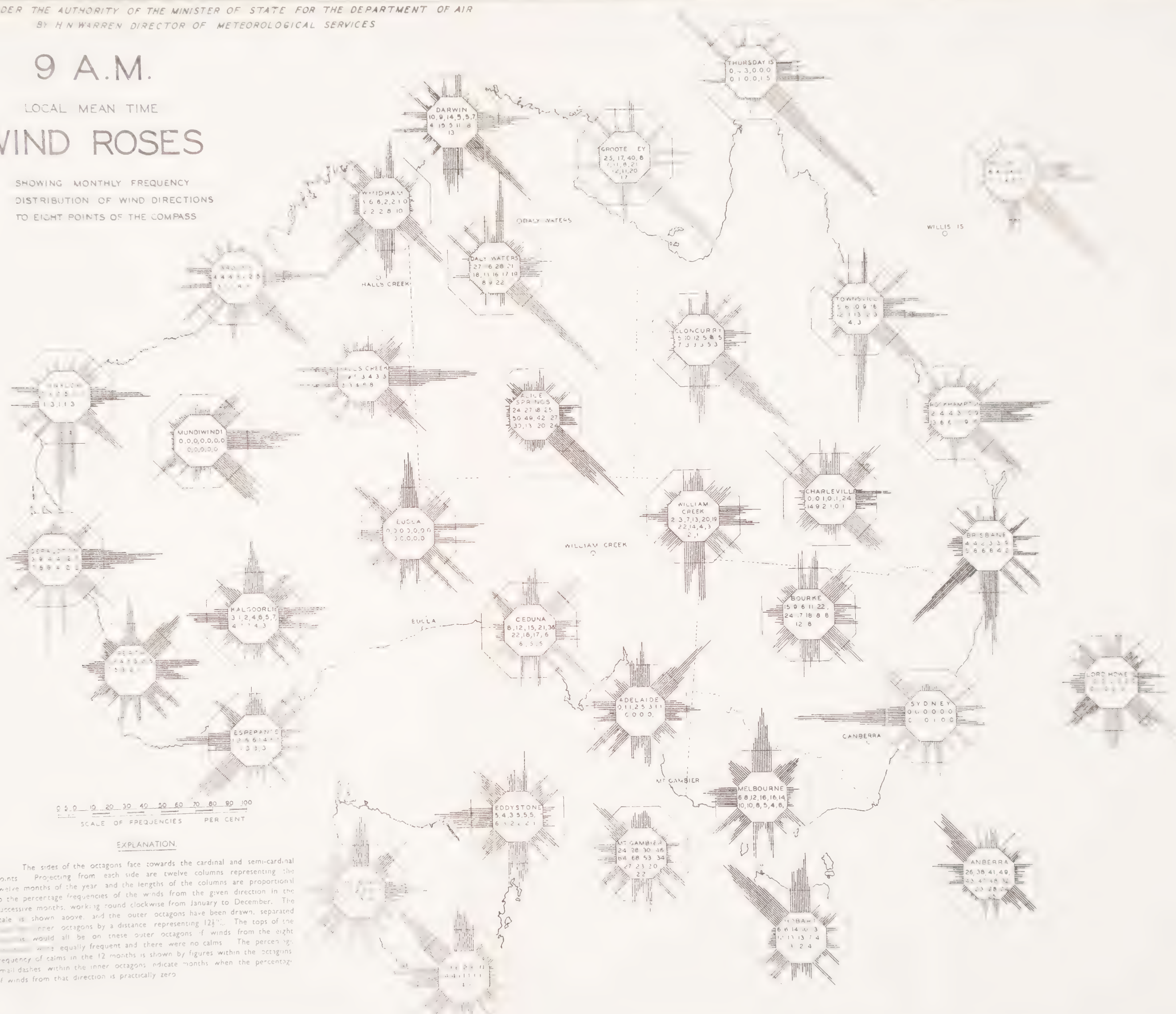


9 A.M.

LOCAL MEAN TIME

WIND ROSES

SHOWING MONTHLY FREQUENCY
DISTRIBUTION OF WIND DIRECTIONS
TO EIGHT POINTS OF THE COMPASS



3 P.M.

LOCAL MEAN TIME

WIND ROSES

SHOWING MONTHLY FREQUENCY
DISTRIBUTION OF WIND DIRECTIONS
TO EIGHT POINTS OF THE COMPASS



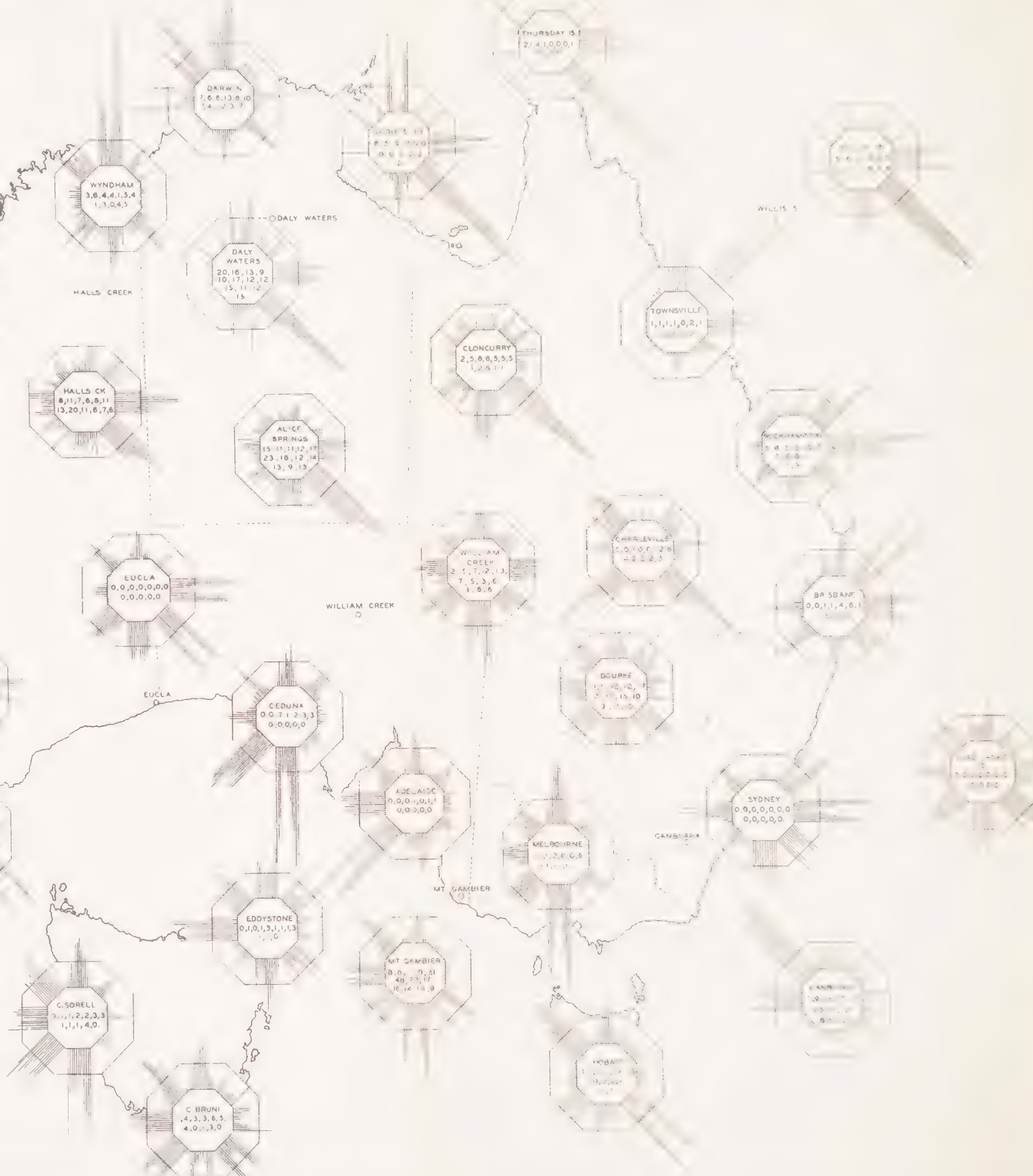
EXPLANATION.

The sides of the octagons face towards the cardinal and semi-cardinal points. Projecting from each side are twelve columns representing the twelve months of the year, and the lengths of the columns are proportional to the percentage frequencies of the winds from the given direction in the successive months, working round clockwise from January to December. The scale is shown above, and the outer octagons have been drawn, separated from the inner octagons by a distance representing 12%. The tops of the columns would all be on these outer octagons if winds from the eight directions were equally frequent and there were no calms. The percentage frequency of calms in the 12 months is shown by figures within the octagons. Small dashes within the inner octagons indicate months when the percentage of winds from that direction is practically zero.



EXPLANATION.

The sides of the octagons face towards the cardinal and semi-cardinal points. Projecting from each side are twelve columns representing the twelve months of the year, and the lengths of the columns are proportional to the percentage frequencies of the winds from the given direction in the successive months, working round clockwise from January to December. The scale is shown above, and the outer octagons have been drawn, separated from the inner octagons by a distance representing 12%. The tops of the columns would all be on these outer octagons if winds from the eight directions were equally frequent and there were no calms. The percentage frequency of calms in the 12 months is shown by figures within the octagons. Small dashes within the inner octagons indicate months when the percentage of winds from that direction is practically zero.



These results of recent years bear out investigations made previously in Australia* in which the atmospheric vapour pressure was used as a measure of comfort, its value for this purpose being that it has equal effect in both indoor and outdoor climates. The limits of comfort range from .2 to .5 inch of vapour pressure. After drawing isopleths for effective temperature (not corrected for altitude), mean vapour pressure reduced to a logarithmic scale, and mean wet bulb, it is found that there is close agreement in defining zones of relative discomfort.

(ii) *Seasons.* The Australian seasons are:—Summer, December to February; autumn, March to May; winter, June to August; spring, September to November. In most parts of Australia, January is the hottest month, but in Tasmania and southern Victoria, February is the hottest; in the tropical north, probably because the cooling "monsoon" rains occur in late summer, December is the hottest month, and at Darwin, November.

On a rainfall basis, in the tropical north the year is divisible into "wet" and "dry" seasons, but on the basis of temperature and physical comfort the "dry" season can be further sub-divided into two parts—"cool dry" and "warm dusty". †

(a) "*Cool dry*" Season. From May to August. The average maximum temperature ranges from 80° to 85° F., the relative humidity is low and in inland areas cold nights are experienced when the temperature drops to 40° F. The skies generally are cloudless, but in about one year in three during June or July one to two inches of rain fall.

(b) "*Warm dusty*" Season. From the end of August temperatures rise and reach a maximum in October or the beginning of November. Temperatures of over 120° F. have been recorded.

(c) "*Wet*" Season. After the first of the heavy storms, the maximum temperatures fall but still remain high with high relative humidity. At Wyndham during January, 1944 the minimum temperature did not drop below 75° F. for fourteen consecutive days. A maximum of over 100° F. was recorded on each rainless day.

In Central as in Northern Australia during the hottest months, the average temperatures range from 80° to 85° F., whereas in Southern Australia they vary from 65° to 70°.

Throughout Australia the coldest month is July, when only a very narrow strip of the northern sea-board has an average temperature as high as 75°. Over the southern half of the continent, July temperatures range from 55° to 45° at elevations below 1,500 feet and fall as low as 35° on the Australian Alps. Here the temperature seldom, if ever, reaches 100° even in the hottest of seasons. Hotham Heights (6,100 feet above Mean Sea Level) recorded the highest maximum of 94.0° on 18th December, 1934. In winter, readings slightly below zero are occasionally recorded on the extreme heights.

Tasmania as a whole enjoys a moderate and equable range of temperature throughout the year, although occasionally hot winds may cause the temperature to rise to 100° in the eastern part of the State.

(iii) *Comparisons with other Countries.* In respect of Australian temperatures generally, it may be pointed out that the mean annual isotherm for 70° F. extends in South America and South Africa as far south as latitude 33°, while in Australia it reaches only as far south as latitude 30°, thus showing that, on the whole, Australia has, latitude for latitude, a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States of America the 70° isotherm extends in several of the western States as far north as latitude 41°. In Europe, the same isotherm reaches almost to the southern shores of Spain, passing afterwards, however, along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a higher temperature than 70°.

* Barkley, H. Zones of Relative Physical Comfort in Australia. Met. Bull. 20, 1934.
† Maze, W. H. Austr. Geog. June, 1945. Settlement in E. Kimberleys.

The extreme range of temperature is less than 100° over practically the whole of Australia, that figure being only slightly exceeded at a very few places; it is mostly 70° to 90° over inland areas, and somewhat less on the coast. In parts of Asia and North America, the extreme range exceeds 130° and 150° in some localities.

Along the northern shores of Australia the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest month is only 8.4° , and the extreme readings for the year, or the highest maximum on record and the lowest minimum, show a difference of under 50° .

The highest temperature recorded in Australia was 127.5° F. at Cloncurry on 16th January, 1889. The world's highest (136° F.) was recorded at Azizia (Tripoli) on 13th August, 1922. The lowest temperature ever recorded in Australia was -8° F. at Charlotte Pass on 14th June, 1945, and again on 22nd July, 1947, as contrasted with the world's lowest recorded temperature of -90° F. at Verkhoyansk (Siberia) on 5th and 7th February, 1892.

A comparison of the mean temperatures and the range from the extreme maximum to the extreme minimum temperatures (in whole degrees) of the capital cities of Australia with those of the main cities of some other countries is shown in the following table :—

TEMPERATURE OF AUSTRALIAN CAPITAL CITIES COMPARED WITH THAT OF THE MAIN CITIES OF OTHER COUNTRIES.

Locality.	Height Above Mean Sea Level.	Latitude.	Longitude.	Mean Annual Tem- perature ($^{\circ}$ Fahr.)	Extreme Tem- perature ($^{\circ}$ Fahr.).		Extreme Range ($^{\circ}$ Fahr.)
					Maxi- mum.	Mini- mum.	
	Fect.	Deg. Min.	Deg. Min.				
Adelaide	140	34 56S	138 35E	63.0	118	32	86
Berlin	196	52 45N	13 24E	48.2	99	-15	114
Bombay	37	18 55N	72 54E	80.6	100	56	44
Buenos Aires ..	82	34 36S	58 22W	61.0	103	28	75
Brisbane	134	27 28S	153 2E	68.9	110	36	74
Cairo	380	29 52N	31 20E	70.2	113	31	82
Canberra	1,906	35 18S	149 6E	56.1	107	18	89
Capetown	40	33 56S	18 29E	62.3	104	31	73
Darwin	97	12 28S	130 51E	82.6	104	56	48
Dublin	155	53 21N	6 16W	50.0	85	7	78
Hobart	177	42 53S	147 20E	54.4	105	28	77
Khartoum	1,280	15 37N	32 33E	84.6	117	41	76
Leningrad	16	59 56N	30 16E	39.2	97	-39	136
London	18	51 28N	0 19W	49.7	100	4	96
Melbourne	114	37 49S	144 58E	58.5	114	27	87
New York	314	40 43N	74 0W	51.8	102	-14	116
Paris	405	48 18N	2 7E	50.3	101	-14	115
Perth	210	31 57S	115 51E	64.4	112	34	78
Rome	207	41 54N	12 29E	59.7	104	21	83
San Francisco ..	155	37 48N	122 26W	55.0	101	27	74
Sydney	138	33 52S	151 12E	63.2	114	36	78
Tokyo	19	35 41N	139 46E	56.9	98	15	83
Vienna	66	48 15N	16 22E	49.3	97	-4	101
Warsaw	436	52 13N	21 1E	46.2	98	-28	126
Wellington	10	41 16S	174 46E	55.3	88	29	59

(iv) *Hottest and Coldest Parts.* A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases, within certain limits, with increasing distance from the coast. This is clearly illustrated by the map of extreme temperature range (page 33.)

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° in the shade. The hottest area of the continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine gold-fields, where the maximum shade temperature during the summer sometimes exceeds 100° continuously for days and weeks. The longest recorded period was 160 days from 31st October, 1923 to 7th April, 1924.

The area affected and the period of duration of the longest heat waves in Australia are shown in the map and diagram on page 34.

(v) *Tabulated Data for Selected Climatological Stations in Australia.* The following tables show normal mean temperature, extreme temperature and normal rainfall for each month for selected climatological stations in each State :—

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS : NEW SOUTH WALES.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
GRAFTON.													
Normal Mean Temperature—													
Maximum .. °F.	89.1	87.9	85.2	81.7	76.1	70.9	70.6	73.3	78.6	82.6	85.7	88.0	80.8
Minimum .. "	66.4	66.3	63.7	57.9	51.0	45.7	43.3	45.1	50.4	56.3	61.3	64.5	56.0
Extreme Temperature—													
Maximum .. °F.	114.0	113.0	108.0	97.0	91.0	88.0	87.5	95.0	99.0	105.0	111.0	113.5	114.0
Minimum .. "	50.0	50.0	41.0	33.0	33.0	28.0	24.9	24.0	32.0	35.0	43.0	45.0	24.0
Normal Rainfall ins.	4.56	4.19	3.72	3.11	2.77	2.44	2.03	0.93	1.83	2.23	3.31	3.52	34.68

ARMIDALE.

Normal Mean Temperature—													
Maximum .. °F.	80.8	79.5	75.3	68.4	61.2	55.3	54.0	57.2	63.8	70.4	76.1	79.3	68.4
Minimum .. "	56.5	55.8	52.1	45.6	39.2	34.9	33.8	34.4	38.9	45.1	50.3	54.3	45.1
Extreme Temperature—													
Maximum .. °F.	103.4	95.0	94.0	86.2	80.0	76.0	68.2	78.2	83.0	90.5	97.5	99.8	103.4
Minimum .. "	40.0	38.0	31.0	25.0	20.0	17.0	14.0	18.0	22.0	26.0	32.0	36.0	14.0
Normal Rainfall ins.	3.88	2.81	2.26	1.87	1.46	2.33	2.11	1.54	2.09	2.35	2.87	3.41	28.98

PORT MACQUARIE.

Normal Mean Temperature—													
Maximum .. °F.	78.6	78.7	77.1	73.2	68.8	64.9	64.0	65.8	68.5	71.2	74.0	76.4	71.8
Minimum .. "	64.4	64.3	61.8	56.8	50.8	46.3	44.8	45.4	49.2	54.8	59.0	62.5	55.0
Extreme Temperature—													
Maximum .. °F.	104.0	105.8	97.0	92.8	84.0	79.0	84.0	91.3	89.4	97.4	104.0	98.8	105.8
Minimum .. "	51.3	48.0	43.5	40.0	34.6	30.5	29.5	31.0	32.5	38.0	41.2	48.0	29.5
Normal Rainfall ins.	4.89	6.48	6.45	7.37	5.76	5.08	4.35	2.64	3.55	3.67	3.22	3.98	57.44

BROKEN HILL.

Normal Mean Temperature—													
Maximum .. °F.	90.5	90.2	84.6	74.7	66.7	59.9	59.5	63.6	70.1	77.3	83.3	88.6	75.8
Minimum .. "	64.5	64.7	60.1	52.6	47.1	42.5	41.2	43.2	47.6	52.9	58.1	62.6	53.1
Extreme Temperature—													
Maximum .. °F.	114.9	115.9	113.9	99.9	87.8	79.0	80.0	84.0	94.0	103.9	110.9	113.9	115.9
Minimum .. "	45.0	42.0	40.0	34.0	30.5	27.0	28.5	29.0	33.0	36.0	41.0	41.8	27.0
Normal Rainfall ins.	0.59	0.96	0.56	0.65	0.94	0.92	0.72	0.63	0.67	0.84	0.86	0.86	9.20

DUBBO.

Normal Mean Temperature—													
Maximum .. °F.	92.1	91.3	85.7	76.9	68.0	61.0	59.7	63.5	70.3	78.5	85.3	89.6	76.8
Minimum .. "	63.8	63.8	58.9	50.8	43.5	39.3	37.5	38.3	42.7	49.3	56.4	61.3	50.5
Extreme Temperature—													
Maximum .. °F.	114.9	113.9	104.5	97.9	90.9	79.9	77.8	87.0	92.9	104.9	110.0	115.4	115.4
Minimum .. "	40.9	35.7	37.7	30.0	23.4	19.9	16.9	17.9	20.9	27.9	30.9	37.9	16.9
Normal Rainfall ins.	2.00	1.49	1.99	1.77	1.44	2.24	1.87	1.51	1.31	1.49	1.93	1.87	20.91

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS:
NEW SOUTH WALES—continued.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
NEWCASTLE.													
Normal Mean Temperature—													
Maximum °F.	77.6	77.7	76.1	72.2	67.2	62.9	61.7	64.0	68.1	71.3	73.9	76.0	70.7
Minimum .. °F.	66.6	67.1	64.7	59.5	53.7	49.5	47.7	48.8	52.6	57.2	61.3	64.3	57.7
Extreme Temperature—													
Maximum .. °F.	112.0	105.3	101.5	94.9	85.0	80.0	79.4	88.3	96.4	100.0	105.0	108.0	112.0
Minimum .. °F.	54.5	54.0	50.0	42.0	41.0	38.0	37.5	37.0	39.0	42.0	47.8	49.0	37.0
Normal Rainfall ins.	3.01	2.96	3.84	5.33	4.64	3.66	4.44	2.34	2.97	2.51	2.21	3.45	41.36

BATHURST.													
Normal Mean Temperature—													
Maximum °F.	83.9	83.7	78.8	69.9	62.1	55.2	53.9	57.4	64.2	70.9	76.7	81.6	69.9
Minimum .. °F.	55.6	55.5	51.0	44.0	38.2	34.8	34.0	34.5	38.1	43.4	48.4	53.5	44.2
Extreme Temperature—													
Maximum .. °F.	112.9	106.4	100.2	90.0	80.0	71.0	70.0	76.4	86.0	96.0	103.5	107.7	112.9
Minimum .. °F.	37.0	35.0	30.0	22.0	20.0	15.7	13.0	18.7	21.0	25.0	31.0	35.0	13.0
Normal Rainfall ins.	2.18	1.73	1.99	1.51	1.39	1.86	2.07	1.65	1.55	2.10	2.04	2.49	22.56

LEETON.													
Normal Mean Temperature—													
Maximum °F.	88.9	88.7	82.6	72.6	64.8	57.7	56.8	60.3	66.8	73.8	81.2	86.4	73.4
Minimum .. °F.	63.2	63.4	59.0	51.2	45.0	40.5	38.9	40.5	44.1	49.7	55.6	60.8	51.0
Extreme Temperature—													
Maximum .. °F.	117.0	105.5	107.0	94.5	82.4	74.5	71.0	81.9	92.5	103.5	107.0	112.0	117.0
Minimum .. °F.	44.0	41.2	40.0	33.0	29.9	24.9	25.3	25.0	26.5	34.0	35.5	41.8	24.9
Normal Rainfall ins.	1.22	0.86	1.03	1.47	1.38	1.84	1.36	1.67	1.31	1.49	1.26	1.24	16.13

JERVIS BAY.(a)													
Normal Mean Temperature—													
Maximum °F.	74.5	75.0	73.3	68.8	64.4	60.2	58.9	61.0	64.3	67.7	70.2	73.0	67.6
Minimum .. °F.	63.0	64.0	62.7	58.5	53.8	50.5	48.6	49.5	52.2	55.3	58.3	61.3	56.5
Extreme Temperature—													
Maximum .. °F.	109.0	100.0	98.0	89.0	83.0	77.0	75.0	80.0	87.0	96.0	96.0	100.0	109.0
Minimum .. °F.	43.0	50.0	46.0	42.0	39.0	37.0	33.0	31.0	40.0	41.0	47.0	42.0	31.0
Normal Rainfall ins.	4.11	3.25	4.46	5.07	5.22	4.32	4.89	2.72	3.06	2.57	2.64	3.82	46.13

ALBURY.													
Normal Mean Temperature—													
Maximum °F.	89.9	90.4	84.3	73.6	64.9	57.4	56.4	60.4	67.2	73.8	81.3	87.4	73.9
Minimum .. °F.	59.8	60.2	55.2	47.8	42.3	39.3	38.2	39.9	43.2	47.7	52.9	57.5	48.7
Extreme Temperature—													
Maximum .. °F.	117.3	114.3	107.3	94.8	83.0	76.0	74.0	79.0	94.8	101.5	107.0	112.6	117.3
Minimum .. °F.	39.0	42.0	39.0	30.0	28.0	25.7	25.0	26.0	29.0	30.0	33.0	41.0	25.0
Normal Rainfall ins.	1.59	1.95	1.81	1.95	2.28	3.32	2.91	3.01	2.30	2.52	1.76	2.25	27.65

COOMA.													
Normal Mean Temperature—													
Maximum °F.	78.8	79.0	73.8	65.0	57.3	50.9	50.4	54.5	61.0	67.5	72.6	77.2	65.7
Minimum .. °F.	52.2	52.4	48.3	41.7	35.3	31.7	30.2	31.5	36.1	40.9	45.8	50.1	41.3
Extreme Temperature—													
Maximum .. °F.	112.0	107.0	104.6	92.7	77.7	69.2	72.9	75.7	86.9	95.7	102.1	110.0	112.0
Minimum .. °F.	29.8	33.0	28.2	22.8	13.0	13.4	11.0	12.0	14.3	22.0	25.8	28.8	11.0
Normal Rainfall ins.	2.31	1.86	1.88	1.46	1.11	1.22	1.27	0.98	1.27	1.51	1.72	2.23	18.85

(a) Australian Capital Territory.

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS: VICTORIA.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
MILDURA.													
Normal Mean Temperature—													
Maximum .. °F.	89.8	90.0	84.4	74.5	66.9	60.4	59.5	63.9	69.9	76.5	83.2	88.2	75.6
Minimum .. °F.	61.0	61.7	57.2	50.5	45.6	41.3	40.5	42.5	46.1	50.9	55.4	59.6	51.0
Extreme Temperature—													
Maximum .. °F.	123.5	118.0	112.0	99.0	90.0	80.0	78.0	86.9	95.0	104.0	113.0	121.5	123.5
Minimum .. °F.	40.0	43.0	37.0	34.0	27.0	26.0	24.0	29.0	29.0	34.0	35.0	40.0	24.0
Normal Rainfall ins.	0.73	0.90	0.70	0.55	1.01	1.05	0.91	1.01	0.96	1.00	0.84	0.71	10.37
BENALLA.													
Normal Mean Temperature—													
Maximum .. °F.	87.6	88.7	82.4	72.3	64.3	56.5	55.7	58.9	65.1	72.4	79.5	84.8	72.3
Minimum .. °F.	58.9	59.6	55.1	48.0	42.6	39.1	38.2	39.7	43.6	48.3	52.1	56.5	48.5
Extreme Temperature—													
Maximum .. °F.	114.0	112.0	108.0	97.0	89.0	70.0	70.0	76.0	88.0	102.0	104.0	111.0	114.0
Minimum .. °F.	40.0	37.0	36.0	32.0	26.0	25.0	27.0	27.9	30.0	33.0	36.0	38.0	25.0
Normal Rainfall ins.	1.58	1.66	1.60	1.99	2.30	3.09	2.78	2.72	2.36	2.41	1.65	1.77	25.91
BENDIGO.													
Normal Mean Temperature—													
Maximum .. °F.	83.0	83.9	78.1	68.4	61.3	54.8	54.2	57.0	62.5	68.9	75.2	80.5	69.0
Minimum .. °F.	56.5	58.3	54.0	48.2	43.7	40.7	39.4	40.2	43.0	46.7	50.9	54.9	48.0
Extreme Temperature—													
Maximum .. °F.	117.4	111.6	104.7	94.7	80.0	77.3	73.0	75.7	90.0	99.7	106.5	111.5	117.4
Minimum .. °F.	37.0	40.0	38.0	33.4	27.3	25.0	23.5	26.0	29.0	32.0	35.0	37.0	23.5
Normal Rainfall ins.	1.14	1.50	1.27	1.49	1.97	2.26	2.21	2.11	2.04	1.70	1.25	1.33	20.27
HORSHAM.													
Normal Mean Temperature—													
Maximum .. °F.	85.1	86.3	80.2	70.7	63.0	56.6	56.0	59.0	64.1	70.2	77.2	82.7	70.9
Minimum .. °F.	55.2	55.9	51.9	47.0	42.9	40.2	38.8	39.9	41.9	45.1	49.6	53.2	46.8
Extreme Temperature—													
Maximum .. °F.	120.0	113.0	108.0	97.0	87.0	74.0	71.0	78.0	94.0	100.0	108.0	115.0	120.0
Minimum .. °F.	39.0	37.0	35.0	31.0	25.0	22.0	21.0	24.0	24.0	25.0	29.0	34.0	21.0
Normal Rainfall ins.	0.75	1.21	0.74	1.23	1.78	1.98	1.89	1.90	1.98	1.48	1.26	1.37	17.57
BALLARAT.													
Normal Mean Temperature—													
Maximum .. °F.	75.7	76.9	71.6	63.0	56.3	50.4	49.8	52.5	57.1	62.4	67.4	72.5	63.0
Minimum .. °F.	50.5	52.9	50.1	45.8	42.6	39.5	38.4	39.4	41.2	43.6	46.0	49.3	44.9
Extreme Temperature—													
Maximum .. °F.	108.5	104.9	102.1	91.2	75.0	63.0	63.0	69.6	83.0	92.5	100.0	102.0	108.5
Minimum .. °F.	36.0	36.2	31.0	31.0	28.0	23.0	26.0	26.3	26.6	29.0	31.5	35.0	23.0
Normal Rainfall ins.	1.26	1.79	1.83	2.13	2.43	2.67	2.68	2.92	2.84	2.41	2.08	2.34	27.38
BAIRNSDALE.													
Normal Mean Temperature—													
Maximum .. °F.	75.3	76.1	73.0	67.5	62.5	57.5	57.0	59.5	63.2	67.5	70.6	74.0	67.0
Minimum .. °F.	53.5	54.5	51.7	46.9	42.5	38.8	38.1	39.6	42.7	46.1	49.0	52.4	46.3
Extreme Temperature—													
Maximum .. °F.	112.0	109.0	105.5	95.0	86.0	75.0	76.0	84.0	92.6	101.0	103.0	111.0	112.0
Minimum .. °F.	35.0	39.0	32.0	29.0	25.0	22.0	21.0	19.0	26.0	27.0	30.0	32.0	19.0
Normal Rainfall ins.	2.48	2.09	2.64	2.02	1.59	2.16	2.06	1.73	2.08	2.68	2.19	2.63	26.35

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS : QUEENSLAND.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
CAIRNS.													
Normal Mean Temperature—													
Maximum °F.	89.7	89.0	87.1	84.9	81.6	78.8	78.1	79.5	82.6	85.6	87.9	89.7	84.5
Minimum .. °F.	74.2	73.9	72.6	70.0	66.2	63.5	61.0	61.1	63.8	67.4	70.4	72.9	68.1
Extreme Temperature—													
Maximum .. °F.	109.8	108.0	100.0	94.5	92.0	92.1	95.1	98.1	94.1	98.1	99.1	105.0	109.8
Minimum .. °F.	63.5	64.0	59.8	57.0	52.2	44.6	43.0	43.2	46.0	54.5	52.0	60.2	43.0
Normal Rainfall ins.	16.51	17.00	17.59	10.76	4.37	2.87	1.56	1.46	1.43	2.40	3.05	7.35	86.35

TOWNSVILLE.													
Normal Mean Temperature—													
Maximum °F.	87.3	87.0	86.6	84.7	81.2	77.3	76.0	77.6	80.3	83.1	85.2	87.0	82.8
Minimum .. °F.	76.2	75.6	73.9	70.6	65.4	61.9	59.8	61.5	65.8	70.5	73.5	75.0	69.2
Extreme Temperature—													
Maximum .. °F.	102.4	110.2	98.0	97.0	88.5	86.5	85.0	89.0	92.5	94.7	99.5	101.1	110.2
Minimum .. °F.	68.2	64.5	65.4	53.9	49.7	47.0	45.3	48.0	52.0	60.2	64.2	66.0	45.3
Normal Rainfall ins.	10.03	9.90	5.15	2.57	0.92	1.41	0.77	0.60	0.49	1.19	2.03	4.63	39.6

CLONCURRY.													
Normal Mean Temperature—													
Maximum °F.	98.7	96.3	94.6	89.9	82.9	77.3	76.4	81.4	88.4	95.1	98.6	100.4	90.0
Minimum .. °F.	76.5	75.4	73.0	66.9	59.7	54.1	51.5	54.3	61.0	68.2	73.5	76.2	65.0
Extreme Temperature—													
Maximum .. °F.	127.5	115.5	110.5	108.0	98.5	99.1	96.0	102.5	106.0	112.0	118.5	125.5	127.5
Minimum .. °F.	59.3	58.0	53.3	48.0	41.3	32.0	34.2	34.5	40.5	49.8	54.0	50.0	32.0
Normal Rainfall ins.	4.73	3.96	1.86	0.62	0.48	0.80	0.23	0.12	0.15	0.44	1.59	1.90	16.1

MACKAY.													
Normal Mean Temperature—													
Maximum °F.	86.2	85.5	83.6	80.7	76.1	72.2	71.0	72.8	77.0	81.3	83.9	86.2	79.0
Minimum .. °F.	73.6	73.2	71.2	66.6	60.8	56.2	53.4	54.8	59.9	65.5	69.4	72.3	64.0
Extreme Temperature—													
Maximum .. °F.	99.8	99.4	98.0	94.0	88.8	85.9	86.0	87.0	92.0	97.0	97.5	99.9	99.0
Minimum .. °F.	60.1	60.3	56.0	49.2	41.6	37.0	35.1	36.1	39.6	44.0	46.6	60.0	35.0
Normal Rainfall ins.	13.56	12.65	10.95	4.64	3.36	2.75	1.57	1.12	1.14	1.55	3.12	6.75	63.0

LONGREACH.													
Normal Mean Temperature—													
Maximum °F.	90.6	96.0	94.1	87.8	80.4	74.3	73.2	77.9	85.4	92.8	97.0	99.7	88.0
Minimum .. °F.	73.3	71.7	68.1	60.1	52.1	46.7	44.3	46.5	53.7	61.5	67.5	71.5	59.0
Extreme Temperature—													
Maximum .. °F.	118.3	113.4	113.0	103.0	96.8	92.0	92.0	96.8	104.2	109.2	114.5	115.6	118.0
Minimum .. °F.	43.9	55.1	48.2	38.1	35.1	26.7	26.7	31.0	31.0	39.0	41.0	43.9	26.0
Normal Rainfall ins.	2.31	3.12	2.10	1.01	0.52	0.94	0.50	0.30	0.52	0.84	1.26	1.82	15.0

ROCKHAMPTON.													
Normal Mean Temperature—													
Maximum °F.	90.0	88.7	87.2	84.2	79.3	74.4	73.7	76.7	81.7	85.9	88.5	90.0	83.0
Minimum .. °F.	72.3	72.1	69.8	64.8	58.3	54.0	51.2	52.9	58.3	63.8	68.0	70.9	63.0
Extreme Temperature—													
Maximum .. °F.	106.8	105.2	104.8	98.0	94.3	88.2	88.8	95.9	100.2	102.8	107.9	111.6	111.0
Minimum .. °F.	60.0	60.8	50.3	43.4	39.8	32.7	34.6	30.3	39.8	43.0	54.0	59.2	32.0
Normal Rainfall ins.	6.70	7.28	3.54	2.66	1.26	2.80	1.77	0.82	0.94	1.99	2.63	4.97	37.0

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS:
QUEENSLAND—*continued.*

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
CHARLEVILLE.													
Normal Mean Temperature—													
Maximum °F.	97.6	96.1	91.7	84.5	76.4	69.3	68.3	72.9	80.4	88.2	93.6	96.4	84.6
Minimum "	70.8	70.1	65.1	55.7	47.2	42.3	40.1	42.1	49.0	57.7	64.4	68.5	56.1
Extreme Temperature—													
Maximum .. °F.	116.6	115.0	110.0	101.8	92.0	87.8	86.5	93.7	102.0	109.8	117.0	118.0	118.0
Minimum .. °F.	52.4	50.0	41.0	34.0	27.5	23.0	23.0	24.0	29.0	34.5	40.0	48.0	23.0
Normal Rainfall ins.	2.65	2.36	1.54	0.95	0.69	1.46	1.32	0.75	0.95	1.02	1.68	2.60	17.97

TOOWOOMBA.													
Normal Mean Temperature—													
Maximum °F.	82.7	81.0	78.2	73.5	67.2	62.0	61.1	64.5	70.5	76.2	80.2	82.2	73.3
Minimum "	61.2	61.0	58.7	52.5	46.6	42.4	40.7	41.9	46.8	52.3	56.6	59.5	51.7
Extreme Temperature—													
Maximum .. °F.	103.6	100.7	99.0	88.2	84.2	80.5	78.2	86.0	89.5	96.0	101.0	105.0	105.0
Minimum .. °F.	45.5	46.0	33.0	31.0	29.6	22.0	22.5	25.0	30.0	32.4	39.4	42.8	22.0
Normal Rainfall ins.	5.15	4.29	3.36	2.62	1.85	2.54	2.06	1.16	1.69	2.39	3.34	4.74	35.19

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS: SOUTH AUSTRALIA.

STREAKY BAY.													
Normal Mean Temperature—													
Maximum °F.	84.8	85.2	81.8	74.2	67.9	62.0	61.0	63.3	67.7	73.2	78.6	82.0	73.5
Minimum "	60.1	60.5	58.5	54.1	51.4	48.2	46.9	47.8	49.2	52.4	55.6	58.3	53.6
Extreme Temperature—													
Maximum .. °F.	114.2	114.2	109.0	96.0	88.3	79.0	73.0	83.0	91.0	104.2	113.8	117.0	117.0
Minimum .. °F.	46.2	44.8	43.5	41.0	34.0	31.0	31.2	32.2	33.9	38.0	39.5	42.5	31.0
Normal Rainfall ins.	0.30	0.68	0.57	0.76	1.72	2.64	2.22	2.19	1.21	1.01	0.63	0.56	14.62

PORT PIRIE.													
Normal Mean Temperature—													
Maximum °F.	89.2	89.6	86.4	76.8	69.5	62.8	61.7	64.8	71.2	77.1	82.9	86.2	76.5
Minimum "	62.9	63.2	61.1	55.2	50.9	46.5	45.5	46.5	49.2	53.4	57.4	60.9	54.4
Extreme Temperature—													
Maximum .. °F.	117.1	113.0	111.0	99.0	85.0	77.0	76.0	83.0	95.0	103.0	109.0	114.2	117.1
Minimum .. °F.	48.2	48.2	47.0	41.0	36.0	30.0	31.0	33.0	35.0	37.0	43.0	46.0	30.0
Normal Rainfall ins.	0.75	0.83	0.70	0.78	1.40	1.54	1.25	1.48	1.23	1.17	0.92	0.94	12.99

YONGALA.													
Normal Mean Temperature—													
Maximum °F.	85.9	85.8	80.7	70.5	62.4	55.5	54.5	57.6	63.8	71.2	78.3	83.5	70.8
Minimum "	55.8	56.3	51.7	45.1	40.9	37.6	36.1	36.9	39.4	43.4	49.0	53.7	45.5
Extreme Temperature—													
Maximum .. °F.	112.2	107.6	105.0	95.0	83.0	71.8	72.4	79.2	91.0	98.2	104.0	107.0	111.2
Minimum .. °F.	38.0	39.0	35.2	28.4	23.5	19.0	19.0	24.0	25.8	24.0	30.2	35.0	19.0
Normal Rainfall ins.	0.80	0.86	0.60	0.88	1.37	1.53	1.62	1.87	1.54	1.23	1.10	1.16	14.56

MT. GAMBIER.													
Normal Mean Temperature—													
Maximum °F.	74.2	75.9	72.7	66.5	61.4	57.0	56.2	58.1	61.1	65.0	68.3	71.9	65.7
Minimum "	53.5	54.8	52.4	49.5	46.4	43.5	42.4	43.1	45.1	46.9	49.6	52.0	48.3
Extreme Temperature—													
Maximum .. °F.	112.6	109.6	106.3	98.2	82.6	72.0	70.5	77.0	89.0	95.0	104.0	107.6	112.6
Minimum .. °F.	33.0	34.0	33.0	29.8	26.2	23.4	23.4	27.5	28.4	30.4	31.0	34.0	23.4
Normal Rainfall ins.	0.93	1.22	1.17	2.14	2.90	3.55	3.49	3.44	2.91	2.10	1.56	1.45	26.86

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS : WESTERN AUSTRALIA.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Normal Mean Temperature—													
Maximum °F.	95.9	95.5	95.3	94.7	90.1	85.8	85.0	88.5	93.5	96.9	98.5	97.0	93.1
Minimum ..	80.2	79.7	79.5	77.2	72.4	68.0	66.2	69.5	74.8	79.7	81.4	81.2	75.8
Extreme Temperature—													
Maximum .. °F.	113.5	108.3	106.0	104.6	102.4	97.5	96.0	102.0	106.0	110.2	111.6	109.5	113.5
Minimum ..	67.5	64.0	65.0	63.5	55.2	53.5	48.0	56.1	60.1	65.0	68.0	67.0	48.0
Normal Rainfall ins.	6.79	6.30	5.22	0.50	0.14	0.20	0.08	0.02	0.05	0.38	1.55	3.92	25.15

WYNDHAM.

Normal Mean Temperature—													
Maximum °F.	84.5	85.2	83.6	80.5	74.2	69.7	67.7	68.8	71.4	73.6	78.5	82.0	76.6
Minimum ..	66.3	66.5	65.0	60.9	56.9	53.8	51.7	52.1	53.0	55.4	60.0	63.4	58.7
Extreme Temperature—													
Maximum .. °F.	112.0	115.5	110.8	102.8	93.8	83.8	81.0	86.0	96.5	104.6	108.8	113.0	115.5
Minimum ..	49.8	51.0	47.0	41.8	38.6	33.6	33.4	37.3	38.3	41.0	44.0	48.0	33.4
Normal Rainfall ins.	0.30	0.42	0.78	0.89	2.58	4.84	3.77	2.57	1.21	0.79	0.27	0.10	18.5

GERALDTON.

Normal Mean Temperature—													
Maximum °F.	84.5	85.2	83.6	80.5	74.2	69.7	67.7	68.8	71.4	73.6	78.5	82.0	76.6
Minimum ..	66.3	66.5	65.0	60.9	56.9	53.8	51.7	52.1	53.0	55.4	60.0	63.4	58.7
Extreme Temperature—													
Maximum .. °F.	112.0	115.5	110.8	102.8	93.8	83.8	81.0	86.0	96.5	104.6	108.8	113.0	115.5
Minimum ..	49.8	51.0	47.0	41.8	38.6	33.6	33.4	37.3	38.3	41.0	44.0	48.0	33.4
Normal Rainfall ins.	0.30	0.42	0.78	0.89	2.58	4.84	3.77	2.57	1.21	0.79	0.27	0.10	18.5

KALGOORLIE.

Normal Mean Temperature—													
Maximum °F.	93.2	93.0	86.3	78.4	70.1	63.6	62.5	66.0	73.6	79.0	86.3	91.1	78.6
Minimum ..	64.2	64.4	61.3	55.2	48.9	44.6	42.9	43.9	48.2	52.7	58.3	62.3	53.9
Extreme Temperature—													
Maximum .. °F.	114.4	115.0	111.0	102.5	92.0	81.8	81.0	87.0	96.0	102.3	110.6	113.0	115.0
Minimum ..	47.1	48.0	41.6	37.0	34.6	31.0	30.0	30.0	31.6	33.4	38.2	46.0	30.0
Normal Rainfall ins.	0.69	0.65	1.26	0.97	0.98	0.98	0.81	0.88	0.38	0.58	0.61	0.67	9.46

COLLIE.

Normal Mean Temperature—													
Maximum °F.	86.4	85.7	80.1	74.3	65.0	61.3	59.8	61.0	61.8	68.8	77.2	83.0	72.4
Minimum ..	55.0	54.9	52.5	47.1	42.9	40.4	39.1	39.8	42.5	45.3	49.7	53.1	46.9
Extreme Temperature—													
Maximum .. °F.	107.8	110.2	104.0	98.0	86.8	76.0	72.4	78.8	86.6	96.4	101.8	106.2	110.2
Minimum ..	37.7	35.2	32.3	29.6	28.0	24.8	25.0	26.2	28.0	31.0	32.6	35.0	24.8
Normal Rainfall ins.	0.67	0.70	0.98	1.85	5.24	6.91	7.84	6.10	4.44	3.06	1.12	0.69	39.6

ALBANY.

Normal Mean Temperature—													
Maximum °F.	73.8	74.2	72.3	70.3	65.9	62.2	60.9	61.7	63.6	65.7	69.2	72.0	67.0
Minimum ..	58.5	58.8	57.5	54.5	50.7	47.8	46.3	46.6	48.3	50.0	53.6	56.5	52.4
Extreme Temperature—													
Maximum .. °F.	106.0	112.6	105.4	90.6	95.3	76.2	73.5	80.0	87.0	97.2	106.0	106.0	112.0
Minimum ..	42.3	41.0	38.7	39.5	34.1	35.0	32.2	34.3	34.0	30.2	40.6	41.2	32.2
Normal Rainfall ins.	1.30	1.03	1.78	2.93	5.30	5.44	6.00	5.42	4.25	3.28	1.65	1.23	39.4

TABULATED DATA FOR CLIMATOLOGICAL STATIONS : TASMANIA.

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
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BURNIE.

Normal Mean Temperature—													
Maximum °F.	66.7	66.9	64.6	61.1	57.9	54.3	52.9	53.7	55.7	57.9	61.6	65.3	59.9
Minimum ..	50.9	52.9	49.4	47.4	44.5	43.2	40.5	41.3	41.8	43.7	47.1	49.7	46.1
Extreme Temperature—													
Maximum .. °F.	83.5	80.3	80.0	71.3	70.5	60.4	59.8	60.6	63.0	72.7	74.5	76.0	83.5
Minimum ..	39.5	38.7	36.0	35.5	33.0	34.0	30.5	30.0	31.0	32.0	36.0	36.5	30.0
Normal Rainfall ins.	1.52	1.73	1.88	3.23	3.53	4.55	4.92	4.88	3.83	3.65	2.62	2.65	38.99

LAUNCESTON.

Normal Mean Temperature—													
Maximum °F.	75.8	76.7	72.0	65.3	59.5	54.6	53.7	56.3	60.0	64.2	69.2	73.1	65.0
Minimum ..	52.1	52.7	49.7	45.3	41.1	38.4	36.9	38.4	41.4	44.1	47.2	50.3	44.8
Extreme Temperature—													
Maximum .. °F.	100.0	101.0	98.5	84.0	74.8	66.2	66.2	68.0	75.0	88.8	92.0	97.6	101.0
Minimum ..	34.0	33.7	31.0	27.0	24.0	22.0	21.0	24.5	24.0	25.0	32.0	31.5	21.0
Normal Rainfall ins.	1.52	1.49	1.71	2.38	2.71	3.11	3.10	3.12	2.81	2.67	1.82	2.12	28.56

ZEEHAN.

Normal Mean Temperature—													
Maximum °F.	66.3	68.6	65.2	59.9	56.0	52.3	51.6	53.0	55.9	58.9	61.4	64.7	59.5
Minimum ..	48.0	49.4	47.3	45.1	42.4	39.2	38.2	39.7	41.0	42.8	44.6	46.8	43.7
Extreme Temperature—													
Maximum .. °F.	94.7	99.2	92.5	81.9	74.6	67.3	62.6	69.3	80.0	85.9	94.0	97.0	99.2
Minimum ..	32.2	30.7	28.0	25.0	23.0	20.5	21.1	22.6	23.0	26.6	30.0	31.2	20.5
Normal Rainfall ins.	5.75	4.37	5.77	8.25	8.69	9.21	9.90	10.30	9.34	8.59	7.43	6.46	94.06

SWANSEA.

Normal Mean Temperature—													
Maximum °F.	70.9	71.4	68.7	63.9	59.4	55.3	54.7	56.5	59.9	63.3	66.8	69.2	63.3
Minimum ..	52.1	53.0	50.3	46.6	42.4	40.0	38.9	39.5	42.3	44.9	47.9	50.6	45.7
Extreme Temperature—													
Maximum .. °F.	104.1	100.7	99.7	85.0	83.9	67.0	67.0	72.6	80.0	92.0	95.0	100.2	104.1
Minimum ..	38.8	38.0	27.0	31.4	27.0	21.0	26.4	25.0	27.2	29.0	32.0	30.0	24.0
Normal Rainfall ins.	1.60	1.89	2.48	2.30	1.65	2.52	1.97	1.37	1.51	2.17	1.84	2.49	23.79

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS : NORTHERN TERRITORY.

DARWIN.

Normal Mean Temperature—													
Maximum °F.	89.9	89.8	90.2	91.9	90.1	87.5	86.6	88.5	91.0	92.6	93.2	92.0	90.3
Minimum ..	77.3	77.1	77.1	75.9	72.6	69.5	67.8	69.7	73.9	77.2	78.2	78.1	74.5
Extreme Temperature—													
Maximum .. °F.	100.0	100.9	102.0	104.0	102.3	98.6	98.0	98.0	102.0	104.9	103.3	102.0	104.9
Minimum ..	68.0	68.9	68.0	65.7	60.2	55.9	55.8	58.1	63.0	68.7	68.8	69.4	55.8
Normal Rainfall ins.	16.18	12.37	11.18	3.08	0.33	0.00	0.01	0.00	0.60	1.93	4.32	8.57	58.68

TABULATED DATA FOR SELECTED CLIMATOLOGICAL STATIONS:
NORTHERN TERRITORY—*continued.*

Particulars.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
DALY WATERS.													
Normal Mean Temperature—													
Maximum .. °F.	97.5	96.6	94.9	93.2	88.0	84.0	83.9	89.1	95.6	100.7	102.1	101.1	93.9
Minimum .. °F.	75.6	74.4	72.6	67.1	61.0	56.9	54.0	56.4	63.9	71.0	74.8	75.9	67.0
Extreme Temperature—													
Maximum .. °F.	113.0	111.0	110.3	106.2	101.0	97.8	98.0	102.4	108.1	112.0	113.0	116.1	116.1
Minimum .. °F.	61.2	61.3	55.2	49.0	43.0	35.1	30.2	39.0	41.2	48.3	56.5	61.2	30.2
Normal Rainfall .. ins.	6.77	5.11	4.24	0.94	0.27	0.14	0.03	0.03	0.12	0.68	2.41	3.98	24.72

ALICE SPRINGS.

Normal Mean Temperature—													
Maximum .. °F.	95.3	94.7	90.1	81.3	73.3	67.1	66.9	72.5	80.1	87.6	91.7	94.7	82.0
Minimum .. °F.	69.8	68.3	62.8	53.8	46.0	41.2	38.9	43.2	49.2	58.5	64.0	68.2	55.3
Extreme Temperature—													
Maximum .. °F.	116.0	114.0	113.0	102.8	101.0	87.0	88.0	96.4	99.7	113.1	115.0	117.0	117.0
Minimum .. °F.	50.0	48.8	39.0	35.4	27.0	22.0	19.0	25.0	30.0	36.4	40.0	46.0	10.0
Normal Rainfall .. ins.	1.74	1.32	1.09	0.39	0.60	0.52	0.29	0.31	0.28	0.71	1.15	1.53	9.93

(vi) *Frosts.** The Observer's Handbook of the Meteorological Office, London, gives the following definition:—"Injury to the tissues of growing plants is not caused until the temperature has fallen considerably below the freezing point of water (32° F.) and a 'ground frost' is regarded as having occurred when the thermometer on the grass has fallen to 30.4° F. or below".

In Australia this definition is adopted for stations equipped with terrestrial minimum thermometers. However, these are few in number, so although many rainfall observers record "hoar frost" when seen, for statistical purposes a screen temperature of 36° F. is taken as indicating light frosts at ground level. For heavy frosts a screen temperature of 32° F. is taken.

In America a "killing" frost is defined as a frost "that is generally destructive of vegetation". A "black frost" is the phenomenon arising out of a combination of low temperature and low humidity causing rupturing of plant cells by expansion, when freezing takes place, of the water which they contain, though frost crystals are not formed on the ground.

The parts of Australia most subject to low temperature are the eastern highlands from about Omeo in Victoria northward to Cambooya and Bybera in Queensland. Most stations in this region experience more than ten nights per month with readings of 32° F. or under for three to five months of the year. In Tasmania, districts on the Central Plateau are subject to such conditions for three to six months of the year. Minimum temperatures of 32° F. are comparatively infrequent in Western Australia except in parts of the south and south-west. In South Australia the Yongala district is much more subject to such temperatures than other parts of the State. Much of the south-east of Queensland has a higher frequency of such readings than South Australia. Generally speaking, the frequency is controlled mainly by altitude, latitude and, to a lesser degree, by proximity to the sea.

Frosts may occur within a few miles of the coastline over the whole continent, except in the Northern Territory and a considerable area of Northern Queensland. Regions subject to frost in all months of the year comprise portions of the tablelands of New South Wales, the Eastern Highlands and parts of the Central Divide and Western district in Victoria, practically the whole of Tasmania and a small area in the south-west of Western Australia.

* Foley, J. C. Frost in the Australian Region (Bull. 32, 1945).

A map showing the average annual number of frost-free days (i.e. days on which the temperature does not fall below 36° F.) appears on page 35.

Over most of the interior of the continent and on the Highlands in Queensland as far north as the Atherton Plateau frosts appear in April and end in September, but they are infrequent in these months. Minimum temperatures of 32° F. are experienced in most of the sub-tropical interior in June and July.

8. Humidity.—After temperature, humidity is the most important element of climate, particularly as regards its effects on human comfort, rainfall supply, and conservation and related problems.

In this publication the humidity of the air has been expressed by the relative humidity, which is the quotient of the vapour pressure divided by the saturation vapour pressure and multiplied by one hundred. The mean 9 a.m. relative humidity, as well as its highest and lowest recorded mean values at 9 a.m., are shown in the tables of climatological data for the capital cities (par. 19). The mean monthly vapour pressure has also been added to these tables.

The annual curve of vapour pressure derived from the normal monthly values for this element is comparable with the maximum and minimum temperature curves, but the relative humidities consisting as they do of the extremes for each month do not show the normal annual fluctuation which would be approximately midway between the extremes.

The order of stations in descending values of 9 a.m. vapour pressure is Darwin, Brisbane, Sydney, Perth, Melbourne, Adelaide, Canberra, Hobart and Alice Springs, while the relative humidity diminishes in the order, Sydney, Canberra, Melbourne, Darwin, Hobart, Brisbane, Perth, Adelaide and Alice Springs.

Further reference to humidity will be found in the section on effective temperature (page 32).

9. Evaporation.—(i) *General.* The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure and wind movement. In Australia the question is, perhaps, of more than ordinary importance, since in its drier regions water has often to be conserved in "tanks" and dams. The magnitude of the economic loss by evaporation will be appreciated from the map reproduced herein (see page 36) which shows that the yearly amount varies from about 20 inches over Western Tasmania to more than 100 inches over the central and north-western parts of Australia. Over an area of 70 per cent. of the continent, comprising most inland districts and extending to the coast in the North-West and Eucla divisions of Western Australia, during no month of the year does the rainfall exceed the evaporation. The central and north-western portions of the continent, comprising 46 per cent. of the total land mass, experience evaporation more than twice as great as their rainfall; it is noteworthy that the vegetation over most of this region is characterised by acacia, semi-desert, shrub steppe and porcupine grass. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more they are protected from the direct rays of the sun and from winds by means of suitable tree planting, the less will be the loss by evaporation. These matters are naturally of more than ordinary concern in the drier districts of Australia.

(ii) *Comments on Map of Average Annual Evaporation.* The map of average annual evaporation in Australia (see page 36) has been compiled on the basis of records obtained from a number of evaporimeters supplemented by estimates derived from records of saturation deficit by applying the Waite Institute factor of 263.* Some modification of the latter values was found to be necessary in comparison with recordings of evaporimeters.

The standard evaporation tank used in Australia is cylindrical in form and is 36 inches in diameter and 36 inches deep. It is surrounded by a 6-inch water jacket and the whole is sunk into the ground so that the water surface is approximately at ground level.

* Prescott, J. A. "Atmospheric Saturation Deficit in Australia" (Trans. Royal Society, S.A. Vol. IV., 1931).

Saturation deficit is obtained from readings of dry and wet bulb thermometers exposed in a standard Stevenson thermometer shelter. Saturation deficit is the difference between the vapour pressure indicated by the dry and wet bulb readings, and the saturation vapour pressure corresponding to the dry bulb temperature.

The Waite formula, $e = 263 \text{ s.d.}$, is not an exact relationship, but it takes account of one of the major factors in evaporation, i.e., the difference between saturation vapour pressures at the mean dew point and at the mean air temperature. Errors in the formula are found to be fairly consistent in considerable areas of Australia and corrections have been applied accordingly. No evaporation records are available north of latitude 20° , and corrections have been extrapolated for these areas. The evaporation stations on which estimates for the tropics have been based are Alice Springs (N.T.) and Winton (Q'land), and to a lesser degree Blackall (Q'land) and Marble Bar (W.A.).

The map thus presents an estimate of evaporation for which allowance should be made for a certain margin of error (perhaps 10 per cent. or so) on the conservative side. In the absence of definite information, such a map should serve a useful purpose as a basis for many climatic studies.

For graphs and tables of mean monthly evaporation and rainfall at certain selected stations see Official Year Book No. 37, pp. 34-35.

10. Rainfall.—(i) *General*. The rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by its physiographical features.

Australia lies within the zones of the south-east trades and "prevailing" westerly winds. The southern limit of the south-east trade strikes the eastern shores at about 30° south latitude, and, with very few exceptions, the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains from the New South Wales northern border to Thursday Island, upon which the rain-laden winds blow. The converse effect is exemplified on the north-west coast of Western Australia, where the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

The westerly winds, which skirt the southern shores, are responsible for the reliable, generally light to moderate rains enjoyed by the south-western portion of Western Australia, the agricultural areas of South Australia, a great part of Victoria, and the whole of Tasmania.

(ii) *Distribution of Rainfall*. The average annual rainfall map of Australia (page 37) shows that the heaviest yearly falls occur on the north coast of Queensland (up to more than 160 inches) and in Western Australia (up to 140 inches), while from 50 to over 60 inches are received on parts of the eastern seaboard from Jervis Bay (New South Wales) to the northern part of Cape York Peninsula, also around Darwin (Northern Territory), on the West Kimberley coast, near Cape Leeuwin (Western Australia), about the Australian Alps in eastern Victoria and New South Wales, and on the north-eastern highlands in Tasmania. A great part of the interior of the continent, stretching from the far west of New South Wales and the south-west of Queensland to the vicinity of Shark Bay in Western Australia, has a very low average rainfall of less than 10 inches a year. Between these two regions of heavy and very low rainfall are the extensive areas which experience useful to good rains, and in the southern and eastern parts of which are found the best country and most of the population and primary production.

(iii) *Factors Determining Occurrence, Intensity and Seasonal Distribution of Rainfall*. Reference has already been made to the frequent rains occurring in the north-eastern coastal districts of Queensland with the prevailing south-east trade winds and to similar rains in the west of Tasmania with the prevailing westerly winds. Other rains in Australia are associated mainly with tropical and southern depressions.

The former chiefly affect the northern, eastern, and to some extent the central parts of the continent and operate in an irregular manner during the warmer half of the year, but principally from December to March. They vary considerably in activity and scope from year to year, occasionally developing into severe storms off the east and north-west

coasts. Tropical rainstorms sometimes cover an extensive area, half of the continent on occasions receiving moderate to very heavy falls during a period of a few days. Rain is also experienced, with some regularity, with thunderstorms in tropical areas, especially near the coast. All these tropical rains, however, favour mostly the northern and eastern parts of the area referred to; the other parts further inland receive lighter, less frequent and less reliable rainfall. With the exception of districts near the east coast, where some rain falls in all seasons, the tropical parts of the continent receive useful rains only on rare occasions from May to September.

The southern depressions are most active in the winter—June to August—and early spring months. The rains associated with them are fairly reliable and frequent over Southern Australia and Tasmania, and provide during that period the principal factor in the successful growing of wheat. These depressions also operate with varying activity during the remainder of the year, but the accompanying rains are usually lighter. The southern rains favour chiefly the south-west of Western Australia, the agricultural districts of South Australia, Victoria, Tasmania, and the southern parts of New South Wales. They sometimes extend into the drier regions of the interior, but only infrequently and irregularly.

The map showing mean monthly distribution of rainfall over Australia (page 38) gives in graphic form information on the amount and occurrence of rain.

(iv) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where Deeral on the north coast-line has an average annual rainfall of 174.00 inches and Tully on the Tully River 175.32 inches. In addition, three stations situated on, or adjacent to, the Johnstone and Russel Rivers have an average annual rainfall of between 144 and 169 inches. The maximum and minimum annual amounts there are:—Deeral, 287.18 in 1945 and 99.60 inches in 1947, or a range of 187.58 inches; Tully, 234.37 in 1936 and 104.98 inches in 1943, or a range of 129.39 inches; Goondi, 241.53 in 1894 and 67.88 inches in 1915, or a range of 173.65 inches; Innisfail, 211.24 in 1894 and 69.87 inches in 1902, or a range of 141.37 inches; Harvey Creek, 254.77 in 1921 and 80.47 inches in 1902, or a range of 174.30 inches.

On four occasions more than 200 inches have been recorded at Goondi, the last of these being in 1910, when 204.52 inches were registered. The records at this station cover a period of 62 years.

In twenty-two years of record Tully has exceeded 200 inches on eight occasions, whilst in a record of 28 complete years Harvey Creek has four times exceeded this figure.

In Tasmania the wettest part is in the West Coast region, the average annual rainfall at Lake Margaret being 146.29 inches, with a maximum of 175.12 inches in 1924.

The driest known part of the continent is in an area of approximately 180,000 square miles surrounding Lake Eyre in South Australia, where the annual average is between 4 and 6 inches and where the fall rarely exceeds 10 inches for 12 months.

Records of stations have at times been interrupted, but of the 23 stations in this region which have an annual average of less than 5 inches, six have complete records extending from 30 to 55 years. Of these Mulka has the lowest average of 3.94 inches (30 years), followed by Troudaninna with an average of 4.15 inches in 42 years. Troudaninna in the period 1893 to 1936 had only one year in which the total exceeded 9 inches (11.07 inches in 1894). There have been protracted periods when the average has even been less than 3 inches. From 1895 to 1903 Troudaninna received the following annual totals:—2.78, 0.99, 5.71, 3.04, 3.18, 2.83, 1.80, 1.11, 4.87, an average of 2.91 inches. From 1918 to 1929 the average was only 2.65 inches, and in this period from December, 1924 to November, 1929 the average was only 1.70 inches.

Mulka since 1918 has only once exceeded 10 inches for the annual total (11.72 inches in 1920), and in 30 years on 15 occasions the annual total has been less than 3 inches. In one particular period from October, 1926 to September, 1930, the average was only 1.26 inches (505 points in 48 months). However, at Kanowana, an even lower four year average of 1.12 inches was recorded between 1896 and 1899 with yearly totals of 43, 225, 87 and 94 points. An even smaller total than 43 points was recorded at Mungeranie in 1889 when only 39 points was recorded on 5 days.

The average number of rain days per month in this region is only 1-2 and the annual number ranges between 10 and 20. Oodnadatta (standard 30 years' average rainfall equal to 4.44 inches) has an average of 20 days of rain per year while Cordillo Downs in the extreme north-east corner of the State of South Australia receives 5.16 inches on 12 days per year, averaging about one day of rain each month in the thirty years' period 1911-1940.

No part of the earth, so far as is known, is absolutely rainless, and although at Arica, in northern Chile, the rainfall over a period of 15 years was nil, a further two years in which there were three measurable showers made the "average" for 17 years 0.02 inches.

(v) *Quantities and Distribution of Rainfall.* The general distribution is best seen from the rainfall map (page 37) which shows the areas subject to average annual rainfalls lying between certain limits. The proportions of the total area of each State and of Australia as a whole enjoying varying quantities of rainfall determined from the latest available information are shown in the following table:—

AVERAGE ANNUAL RAINFALL DISTRIBUTION.
(Per Cent.)

Average Annual Rainfall.	N.S.W. (a)	Victoria.	Queens- land.	South Australia	Western Australia.	Tas- mania. (b)	Northern Territory	Total.
Under 10 inches ..	19.7	Nil	13.0	82.8	58.0	Nil	24.7	37.6
10-15 " ..	23.5	22.4	14.4	9.4	22.4	Nil	32.4	19.9
15-20 " ..	17.5	15.2	19.7	4.5	6.8	0.7	9.7	10.9
20-25 " ..	14.2	17.9	18.8	2.2	3.7	11.0	6.6	9.1
25-30 " ..	9.1	18.0	11.6	0.8	3.7	11.4	9.3	7.3
30-40 " ..	9.9	16.1	11.1	0.3	3.3	20.4	4.7	6.6
Over 40 " ..	6.1	10.4	11.4	Nil	2.1	56.5	12.6	8.6
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes Australian Capital Territory.
available.

(b) Over an area of 2,777 square miles no records are

Referring first to the capital cities, the records of which are given in the next table, it will be seen that Sydney, with an average rainfall of 46.21 inches, occupies the chief place: Brisbane, Perth, Melbourne, Hobart, Canberra and Adelaide follow in that order, Adelaide with 21.10 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.46 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, average figures for the various climatological districts have been selected. (See map on p. 38). The figures for Northern Rivers (District 14), show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for the Central Coast, south-west of Western Australia (District 9), are the reverse, for while the summer months are dry, the winter months are very wet. In the districts containing Melbourne and Hobart the rain is fairly well distributed throughout the twelve months, with a maximum in October for both districts. In Queensland, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons in eastern parts.

On the coast of New South Wales, the first half of the year is the wettest, with heaviest falls in the autumn; the averages during the last six months are fair, and moderately uniform. Generally it may be said that approximately one-third of the area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 inches or more, the remaining two-thirds averaging from 5 to 20 inches.

(vi) *Tables of Rainfall.* The table of rainfall for a fairly long period of years for each of the various Australian capitals affords information as to the variability of the fall in successive years, and the list of the more remarkable falls furnishes information as to what may be expected on particular occasions.

RAINFALL : AUSTRALIAN CAPITAL CITIES.

Year.	CANBERRA.(a)		PERTH.		ADELAIDE.		BRISBANE.		SYDNEY.		MELBOURNE.		HOBART.(b)	
	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.
	in.		in.		in.		in.		in.		in.		in.	
1920 ..	..	..	40.35	124	26.70	119	39.72	122	43.42	159	28.27	162	18.00	182
21 ..	..	..	41.09	135	22.64	100	54.31	167	43.34	140	29.76	154	18.04	159
22 ..	..	..	31.86	135	23.20	117	35.82	109	39.35	136	25.02	151	28.27	189
23 ..	..	..	44.47	134	29.79	139	23.27	93	37.01	123	22.64	158	32.93	198
24 ..	..	..	33.79	119	23.44	143	41.08	114	37.01	136	36.48	171	28.76	197
25 ..	..	..	31.41	126	21.91	118	53.10	139	50.35	145	17.57	144	22.67	170
26 ..	..	..	49.22	167	22.20	116	39.82	111	37.07	127	20.51	149	25.79	187
27 ..	..	..	36.59	133	16.92	101	62.08	130	48.56	138	17.98	135	20.13	185
28 ..	18.59	90	44.88	140	19.43	107	52.64	145	40.07	130	24.09	151	30.23	205
29 ..	23.12	70	36.77	132	17.51	119	39.78	118	57.90	129	28.81	168	26.55	194
30 ..	17.33	82	39.80	120	18.65	116	41.22	144	44.47	141	25.41	145	19.38	152
31 ..	24.02	103	39.18	118	22.26	145	66.72	130	49.22	153	28.63	164	27.17	179
32 ..	20.18	118	39.40	121	25.04	141	24.79	97	37.47	140	31.08	179	30.29	155
33 ..	20.78	96	32.47	116	22.12	130	49.71	118	42.71	153	22.28	136	23.18	182
34 ..	35.58	131	40.61	120	20.24	125	54.26	117	64.91	153	33.53	157	23.17	194
35 ..	23.78	95	32.28	129	23.45	140	34.64	111	30.97	131	29.98	183	32.22	196
36 ..	26.24	108	30.64	118	19.34	121	21.77	101	30.22	130	24.30	187	19.60	178
37 ..	20.46	82	35.28	120	23.05	128	34.79	113	52.00	157	21.45	144	20.65	160
38 ..	19.26	79	29.64	111	19.26	119	43.49	110	39.17	132	17.63	131	31.32	169
39 ..	27.63	116	45.70	123	23.29	139	41.43	122	33.67	127	33.11	166	27.23	188
40 ..	17.38	64	20.00	98	16.16	116	42.37	93	39.34	125	19.83	126	17.17	135
41 ..	19.55	91	34.74	122	22.56	126	31.50	105	26.74	129	31.78	157	23.49	145
42 ..	25.76	104	39.24	140	25.44	133	44.01	125	48.29	121	29.79	148	19.42	163
43 ..	24.59	123	31.46	117	17.84	135	50.68	126	50.74	136	18.80	150	20.84	149
44 ..	12.05	75	27.39	123	17.13	114	27.85	100	31.04	115	21.32	143	26.23	151
45 ..	22.35	100	52.67	137	17.85	105	48.16	130	46.47	136	19.22	152	16.92	157
46 ..	22.31	94	41.47	122	22.59	135	38.66	83	36.05	111	29.80	177	39.45	193
47 ..	27.95	135	43.42	137	21.09	145	60.30	146	41.45	137	30.47	163	38.61	181
48 ..	32.11	101	34.75	126	24.70	122	41.54	106	38.83	131	20.98	155	23.42	178
Average No. of Years Standard 30 years Normal	22.91	98	35.05	121	21.10	124	44.71	125	46.21	151	25.55	141	24.62	168
	21	21	73	73	110	110	97	89	90	90	93	93	66	66
	..	..	35.99	128	21.09	122	40.09	117	44.80	143	25.89	156	25.03	180

(a) Commonwealth Forestry Bureau ; records in issues prior to No. 36 were for the station at Acton which closed down in 1939. (b) Records taken from present site commenced 1883.

11. Remarkable Falls of Rain.—The following are the most notable falls of rain in the various States and Territories which have occurred within a period of twenty-four hours. For other very heavy falls at various localities reference may be made to Official Year Book No. 14, pp. 60-64, No. 22, pp. 46-48 and No. 29, pp. 43, 44 and 51 :—

HEAVY RAINFALLS : NEW SOUTH WALES, UP TO 1948, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Bega ..	27 Feb., 1919	17.88	Morpeth ..	9 Mar., 1893	21.52
Broger's Creek ..	14 Feb., 1898	20.05	Mt. Kembla ..	13 Jan., 1911	18.25
" ..	13 Jan., 1911	20.83	Mt. Pleasant ..	5 May, 1925	20.10
Buladelah ..	16 Apr., 1927	19.80	Nimbin ..	6 Feb., 1930	16.26
Burrigate ..	27 Feb., 1919	16.38	South Head (Sydney Harbour) ..	16 Oct., 1844	20.41
Candelo ..	27 Feb., 1919	18.58	" ..	29 Apr., 1841	20.12
Condong ..	27 Mar., 1887	18.66	" ..	5 Mar., 1893	20.00
Cordeaux River ..	14 Feb., 1898	22.58	Towamba ..	15 Mar., 1936	20.00
Kembla Heights ..	13 Jan., 1911	17.46	Viaduct Creek ..		
Madden's Creek ..	13 Jan., 1911	18.68			

HEAVY RAINFALLS : QUEENSLAND, UP TO 1948, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Babinda (Cairns) ..	2 Mar., 1935	24.14	Kuranda (Cairns) ..	2 Apr., 1911	28.80
Banyan (Cardwell) ..	12 Feb., 1927	24.00	Landsborough ..	2 Feb., 1893	25.15
Buderim Mountain ..	11 Jan., 1898	26.20	Macnade Mill ..	6 Feb., 1901	23.33
Carruchan ..	24 Jan., 1934	24.00	Plane Creek (Mackay)	26 Feb., 1913	27.73
Crohamhurst ..			Port Douglas ..	1 Apr., 1911	31.53
(Blackall Range)	2 Feb., 1893	35.71	Sarina ..	26 Feb., 1913	27.75
Deeral ..	2 Mar., 1935	27.60	Springbrook ..	24 Jan., 1947	27.07
Flat Top Island ..	21 Jan., 1918	25.18	Tully Mill ..	12 Feb., 1927	23.86
Goondi ..	30 Jan., 1913	24.10	Woodlands (Yepp'n)	3 Jan., 1891	23.07
Harvey Creek ..	3 Jan., 1911	27.75	Yarrabah ..	2 Apr., 1911	30.65

HEAVY RAINFALLS : WESTERN AUSTRALIA, UP TO 1948, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Balla Balla ..	21 Mar., 1890	14.40	Pilbara ..	2 Apr., 1898	14.04
Boodarie ..	21 Mar., 1899	14.53	Roebuck Plains ..	5 Jan., 1917	14.01
Broome ..	6 Jan., 1917	14.00	" "	6 Jan., 1917	22.36
Carlton Hill ..	7 Feb., 1942	12.75	Thangoo ..	17-19 Feb., '96	24.18
Derby ..	7 Jan., 1917	16.47	Towrana ..	1 Mar., 1943	12.16
Fortesque ..	3 May, 1890	23.36	Whim Creek ..	3 Apr., 1898	29.41
Jimba Jimba ..	1 Mar., 1943	11.54	Winderrie ..	17 Jan., 1923	14.23
Marble Bar ..	2 Mar., 1941	12.00	Widjip ..	1 Apr., 1934	19.54

HEAVY RAINFALLS : NORTHERN TERRITORY, UP TO 1948, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Bathurst Island ..			Cape Don ..	13 Jan., 1935	13.58
Mission ..	7 Apr., 1925	11.85	Darwin ..	7 Jan., 1897	11.67
Borroloola ..	14 Mar., 1899	14.00	Groote Eylandt ..	9 Apr., 1931	14.29
Brock's Creek ..	24 Dec., 1915	14.33	Timber Creek ..	5 Feb., 1942	13.65

HEAVY RAINFALLS : SOUTH AUSTRALIA, UP TO 1948, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Ardrossan ..	18 Feb., 1946	8.10	Mannum ..	25 Jan., 1941	6.84
Cape Willoughby ..	18 Feb., 1946	6.80	Port Victoria ..	18 Feb., 1946	7.08
Carpa ..	18 Feb., 1946	7.83	Torrens Vale ..	25 Jan., 1941	6.77
Edithburg ..	18 Feb., 1946	7.46	Wilmington ..	1 Mar., 1921	7.12
Hesso ..	18 Feb., 1946	7.36	Wirrabara ..	7 Mar., 1910	6.80
Maitland ..	18 Feb., 1946	7.21	Wynburn ..	28 Feb., 1921	7.70

HEAVY RAINFALLS : VICTORIA, UP TO 1948, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Blackwood "Green-hill" ..	26 Jan., 1941	8.98	Kalorama ..	1 Dec., 1934	10.05
Cann River ..	27 Feb., 1910	9.56	Korumburra ..	1 Dec., 1934	8.51
" " ..	16 Mar., 1938	9.94	Mt. Buffalo ..	6 June, 1917	8.53
Corinella ..	28 June, 1948	8.75	Olinda ..	1 Dec., 1934	9.10
Erica ..	1 Dec., 1934	8.66	Tambo Crossing ..	13 July, 1925	8.89
Hazel Park ..	1 Dec., 1934	10.50	Tonghi Creek ..	27 Feb., 1919	9.90

HEAVY RAINFALLS : TASMANIA, UP TO 1948, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		in.			in.
Cullenswood ..	5 Apr., 1929	11.12	Riana ..	5 Apr., 1929	11.08
Gould's Country ..	8-10 Mar., '11	15.33	The Springs ..	30-31 Jan., '16	10.75
Lottah ..	8-10 Mar., '11	18.10	Triabunna ..	5 June, 1923	10.20
Mathinna ..	5 Apr., 1929	13.25			

HEAVY RAINFALLS : AUSTRALIAN CAPITAL TERRITORY, UP TO 1948, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt. in.	Name of Town or Locality.	Date.	Amnt. in.
Canberra (Acton) ..	27 May, 1925	6.84	Land's End ..	27 May, 1925	6.35
Cotter Junction ..	27 May, 1925	7.13	Uriarra (Woodside)	27 May, 1925	6.57

12. **Snowfall.**—Light snow has been known to fall occasionally as far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria as far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where also the temperature falls below zero Fahrenheit during the night. In the ravines around Mt. Kosciuszko and similar localities the snow never entirely disappears after a severe winter.

13. **Hail.**—Hail falls most frequently along the southern shores of the continent in the winter, and over eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen-egg, and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.

The hailstones occur most frequently when the barometric readings indicate a flat and unstable condition of pressure. Tornadoes or tornadic tendencies are almost invariably accompanied by hail, and on the east coast the clouds from which the stones fall are frequently of a remarkable sepia-coloured tint.

14. **Barometric Pressures.**—The mean annual barometric pressure (corrected to sea level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.90 inches at Darwin to 30.12 inches at Alice Springs. Barometer readings corrected to mean sea level and standard gravity have, under anticyclonic conditions, ranged as high as 30.935 inches (at Hobart on 13th July, 1846) and have fallen as low as 27.55 inches. This lowest record was registered at Mackay during a tropical hurricane on 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on 10th March, 1918. For graphs of Mean Barometric Pressure at Capital Cities see Official Year Book No. 37, p. 35.

15. **Wind.**—(i) *Trade Winds.* The two distinctive wind currents in Australia are, as previously stated, the south-east trade and the “prevailing” westerly winds. As the belt of the earth's atmosphere in which they blow apparently follows the sun's ecliptic path north and south of the equator, so the area of the continent affected by these winds varies at different seasons of the year. During the summer months the anticyclonic belt travels in high latitudes, thereby bringing the south-east trade winds as far south as 30° south latitude. The “prevailing” westerly winds retreat a considerable distance to the south of Australia, and are less in evidence in the hot months. When the sun passes to the north of the equator, the south-east trade winds follow it, and only operate to the north of the tropics for the greater part of the winter. The westerly winds come into lower latitudes during the same period of the year. They sweep across the southern areas of the continent from Cape Leeuwin to Cape Howe, and during some seasons are remarkably persistent and strong, and occasionally penetrate to almost tropical latitudes.

(ii) *North-west Monsoon.* As the belt of south-east trade winds retreats southward during the summer, it is replaced in the north and north-west of Australia first by a sequence of light variable winds and then by the north-west monsoon. In Australia, the north-west monsoon has not the persistence nor regularity of the Indian south-west

monsoon but is sufficiently characteristic for the summer in the north of Australia to be called the "North-west Season". In central and eastern Queensland, the north-west monsoon in the summer has comparatively little effect and the trade winds, albeit weakened, are still dominant winds. With the migration of the sun northward in the autumn, the north-west monsoon is itself replaced first by light variable winds and then by the trade winds.

(iii) *Land and Sea Breezes.* The prevailing winds next in order of importance are the land and sea breezes. On the east coast the sea breezes which come in from the north-east, when in full force, frequently reach the velocity of a gale during the afternoon in the summer months, the maximum hourly velocity, ordinarily attained about 3 p.m., not infrequently attaining a rate of 35 to 40 miles per hour. It was formerly thought that this wind did not ordinarily penetrate more than 9 or 12 miles inland. It is now known that coastal air penetrates upwards of 60 miles or more, as in the case of the "sea breeze" which reaches Canberra late on a summer afternoon. Whether this represents a true sea breeze or the movement of a "coastal front" (which is said to penetrate as much as 200 miles inland by late at night) is an open question.

The land breezes on the east coast blow out from a westerly direction during the night.

On the western shores of the continent the directions are reversed. The sea breezes come in from the south-west, and the land breezes blow out from the north-east.

(iv) *Inland Winds.* Inland, the direction of the prevailing winds is largely regulated by the seasonal changes of pressure, so disposed as to cause the winds to radiate spirally outward from the centre of the continent during the winter months, and to circulate spirally from the seaboard to the centre of Australia during the summer months.

(v) *Prevailing Direction at the Capital Cities.* In Canberra at 9 a.m. the air is usually calm, particularly during the winter months, but such winds as do occur are predominantly north-westerly, though a proportion of south-easterly winds occur during the autumn. At 3 p.m. the predominant wind is north-westerly.

In Perth at 9 a.m. east to south-east winds prevail from September to March, while from April to August north-north-east to east winds predominate. At 3 p.m. the prevailing wind is south-south-west from October to May inclusive and westerly at other times.

In Adelaide at 9 a.m. the predominant wind is north-easterly from April to August but during the rest of the year no particular direction is outstanding. At 3 p.m. the predominant wind is south-westerly for all months except May, June and July. Throughout the year winds with an easterly component are rare in the afternoon.

In Brisbane at 9 a.m. the most frequent winds during the colder two-thirds of the year come from the south or south-west, while in the warmer months south to south-east winds are more usual. At 3 p.m. winds with an easterly component predominate, especially north-easterlies during the warmer half of the year.

In Sydney at 9 a.m. by far the most prevailing wind is a westerly, particularly during the colder two-thirds of the year. At 3 p.m., during the warmer two-thirds of the year, winds with an easterly component are most frequent with a smaller proportion of southerlies and westerlies during the winter months.

In Melbourne at 9 a.m. northerlies are the most frequent winds during the period February to October with a moderate proportion of westerlies in the spring. During the summer months, winds with a southerly component are in evidence to a slightly greater degree than any others. At 3 p.m. southerly winds prevail during the warmer two-thirds of the year with the frequency of northerlies increasing during the colder months.

In Hobart at 9 a.m. the most favoured directions are from the north-west and north with a good proportion of south-easterlies showing up at 3 p.m. during the warmer months.

(vi) *Maximum Wind Gusts.* The records of maximum wind gusts have mostly been obtained with the Dines type of anemometer with the head exposed some 30 or 40 feet above the ground. The data are set out in the tables which follow for stations arranged in the following three groups:—

- (a) *Stations North of Brisbane (Tropical).* Cairns, Townsville, Rockhampton, Willis Island, Darwin, Groote Eylandt, Karumba, Onslow and Cloncurry.
 (b) *Capital Cities.* Brisbane, Sydney, Melbourne, Hobart, Adelaide and Perth.
 (c) *Other Stations south of Brisbane (located at Aerodromes).* Archerfield, Lord Howe Island, Richmond, Rathmines, Mascot, Wagga, Canberra, Essendon, Laverton, Western Junction, Oodnadatta, Ceduna, Parafield, Guildford and Kalgoorlie.

PERCENTAGE FREQUENCY OF MAXIMUM GUSTS.
(Per Cent.)

Station Group.	Wind Speed Range (miles per hour).												
	36-40.	41-45.	46-50.	51-55.	56-60.	61-65.	66-70.	71-75.	76-80.	81-85.	86-90.	91-95.	96-100.
Stations North of Brisbane..	2	7	30	24	4	9	13	..	7	..	..	..	4
Capital Cities ..	..	..	..	10	10	21	28	17	12	..	2	..	..
Other Stations South of Brisbane ..	..	..	3	7	13	21	21	16	9	5	2	3	..

PERCENTAGE FREQUENCY OF DIRECTIONS OF THE HIGHEST GUSTS RECORDED THROUGHOUT THE YEAR.
(Per Cent.)

Station Group.	Direction of Maximum Yearly Gusts.							
	South-West.	South.	South-East.	East.	North-East.	North.	North-West.	West.
Stations North of Brisbane ..	13	11	31	22	4	2	13	4
Capital Cities ..	18	8	6	..	..	4	27	37
Other Stations South of Brisbane ..	17	9	2	2	..	19	31	20

HIGHEST MAXIMUM GUST REGISTERED IN EACH CALENDAR MONTH IN EACH REGION.
(Miles per hour.)

Station Group.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Stations North of Brisbane ..	100	69	100	60	46	43	43	52	52	80	61	78
Capital Cities ..	72	67	68	81	73	80	78	87	84	95	79	79
Other Stations South of Brisbane ..	91	87	91	82	79	71	76	80	90	80	74	89

From the foregoing tables it is seen that, for Capital Cities (Group 2), maxima of 60 to 75 miles per hour are frequent, with rare higher extremes of possibly up to 95 m.p.h. The most frequent directions of maximum gusts are from the west or north-west with a moderate percentage from the south-west.

At aerodrome stations south from Brisbane (Group 3), the most frequent maxima are from 55 to 75 m.p.h., with rare occurrences up to 95 m.p.h. Here the most frequent directions are from the north-west with moderate percentages of west, north and south-west.

The frequency distribution of maximum yearly gusts at tropical stations (Group 1) is quite different from those further south. Generally, maxima of 45 to 55 m.p.h. predominate, with a generally lower frequency of the higher gusts than in the other regions. However, in cyclones, gusts of 98 and 100 m.p.h. have been recorded, prior, in some cases, to the anemometer mast being blown away. The most frequent directions of the maximum gusts in the group are from the south-east and east.

Maximum yearly "gusts" may arise out of a high general wind, tornado or cyclone or be associated with squalls with the passage of a cold front or thunderstorm.

16. *Meteorology of Australia.*—(i) *General.* Meteorology, as the science of weather, attempts to apply physical principles to an explanation and interpretation of the variations in weather phenomena. The condition and behaviour of the air at a given time and place constitute weather. (Climate is the long-term weather experience of any locality.)

In Australia, certain selected stations, at three hourly intervals, measure or observe :—(a) The temperature of the air ; (b) pressure ; (c) the speed and direction of air movement ; (d) moisture content ; and (e) the state of the sky and the occurrence, present and past, of precipitation. These conditions are summarized by analysis as follows :—

(a) *Identification of Air Masses.* An air mass is a widespread body of air which is approximately homogeneous in its horizontal extent, having fairly definite characteristic properties in regard to temperature, humidity, etc., which determine its type.

In the Australian region, the air masses are frequently ill-defined, but as well as the two broad classifications of cold and warm air masses the following primary types may be distinguished :—Equatorial, Tropical, Southern-Maritime, Indian, Pacific and Continental. These are obviously so called because of their sources of origin. In addition, there are sub-types which are modifications of the foregoing.

(b) *Demarcation of Air Mass Boundaries.* These are generally exhibited as "fronts" which are zones of rapid change of the air mass properties both at the earth surface and in the upper levels.

There are two main classes of fronts, viz. :—*Cold Fronts*, when a cold air mass is displacing and under-running a warmer one, and *Warm Fronts* when warm air is displacing, and at higher levels moving over, a cold air mass. An "occlusion" occurs when the warm air is lifted bodily and only cold air is found at the surface. Well defined, distinct warm fronts are infrequently found over Australia, being more characteristic of higher latitudes.

(c) *Pressure Isolines.* These are drawn joining places of equal pressure, resulting in the familiar pattern of isobars delineating anticyclones ("highs") and cyclones ("lows") as seen on the Weather Map appearing in the daily press.

(ii) *The Daily Press Weather Map.* (a) *Pressure Gradient.* The distance between the isobars indicates the "pressure gradient". The gradient is steeper when the isobars are closer together and flatter where the isobars are further apart.

There is a definite relation between the winds and isobars. The winds blow almost parallel to and slightly across the isobars from high to low pressure and clockwise around a "low" and anti-clockwise around a "high" (in the Southern Hemisphere), i.e. "In the Southern Hemisphere an observer standing with his back to the wind will have the lower pressure to his right". The angle at which the wind arrows cross the isobars is very variable. Over the land it averages about 30° , over the sea about 10° .

The winds are strongest where the pressure gradient is steepest or where the isobars are crowded together. In other words, the speed of the wind is proportional to the pressure gradient. The "gradient wind" speed estimated from the closeness of the isobars is found at a height of from 2,000 to 3,000 feet above the surface, and the following table shows the speed for straight isobars of intervals equal to two millibars (one millibar = 0.029 inches of mercury or 1,000 millibars = 29.53 inches).

WIND SPEED IN RELATION TO DISTANCE BETWEEN ISOBARS.

Distance between Isobars representing a pressure difference of 2 millibars.	Wind Speed (miles per hour).	
	Latitude 25° .	Latitude 35° .
Miles—		
180	20	15
110	34	25
75	50	37
55	70	55

If the curvature of the isobars is appreciable, the winds will be underestimated around "highs" and overestimated around "lows".

(b) *Isobaric Forms. Cyclones and Storms.* The "elements" in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to deep depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Strait, including the coast-line of Victoria, and on the west coast of Tasmania. Apparently the more violent wind pressures from these disturbances are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the south-west and finally towards the south-east.

Very severe cyclones, locally known as "willy willies," are peculiar to the north-west coast of Western Australia from the months of November to April, inclusive. They usually originate over the ocean to the north or north-west of Australia, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes 20° and 22° South. The winds in these storms, like those from the north-east tropics, are very violent and destructive. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coast-line, or cross the continent to the Great Australian Bight. When they take the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on "southerly bursters", a characteristic feature of the eastern part of Australia, appear in previous issues of the Official Year Book (see No. 6, pp. 84-86), and a special article dealing with "Australian Hurricanes and Related Storms" appears in Official Year Book No. 16, pp. 80-84.

Depressions vary considerably in their isobaric forms, intensity and other characteristics. Some bring rain in variable quantities, some heat and others mainly wind. A common type in southern Australia is the "a" shaped trough with an abrupt "backing" of the wind or "line squall" as it passes. The cold front is most frequently found through the centre of the "trough" because it is along this line, and extending into the upper levels of the atmosphere that the demarcation of different air masses is so well defined. The best rains occur in inland Australia when extensive masses of warm moist tropical air move into the interior and are forced to rise by convergence of flow or by impact with a cold air stream.

The speed of low pressure systems is very variable, but in general in southern latitudes, the movement is of the order of 500 to 700 miles per day.

Anticyclones. The anticyclone or "high" is usually distinguished by a series of closed isobars of roughly circular or oval form enclosing the region of highest pressure. They usually cover much larger areas than depressions and in a well-defined "high" the winds blow spirally outward with subsidence or sinking of stable air near the centre, where the winds are generally light and variable. Anticyclonic weather is usually regarded as quiet and settled, but actually considerable variations occur according to the activity of neighbouring "lows" and pressure gradients.

The most frequent interval between the passage of successive centres is five days. The general direction of movement is from west to east, but the speed is much slower than that of depressions, averaging in Australian regions about 400 miles per day, but occasionally accelerating, or, on the other hand, exhibiting an apparent retrograde movement.

In winter, the usual path is across the centre of the continent; in summer, south of the southern coastline.

When the upper air temperatures in an anticyclone are low, that is, when the "high" is of little vertical depth, it usually travels more rapidly than one which is of greater depth and warm in its upper layers. A "wedge" or "tongue" of high pressure is an extension of an anticyclone between two "lows" and thus the opposite of the trough.

Waves of Low Pressure (or series of depressions). This type is frequently experienced in southern Australia in winter and spring. The passage of the waves from the west is accompanied by a "backing" of the wind from about north-west to south-west and "veering" to north-west again as the wave of low pressure passes. Each wind shift may be marked by rain squalls, the effect of which is intensified on the windward slopes of coastal hills.

(c) *Rain Areas.* These are depicted on the press chart by hatched areas and a continuous check on these rain areas from day to day will do much to explain the characteristics of the various wind-streams and cold and warm front precipitation.

Fundamentally, rain is produced by the uplift, and so cooling and condensation, of a moist air mass, by either one or all of the following ways:—(i) *Convection.* Uplift by heating from below. (ii) *Orographic.* Forced uplift due to elevated land barriers. (iii) *Convergence.*—The net result when more air flows into an area than flows out. The excess air will rise and flow outward aloft. There are two main causes—surface friction, which causes a flow of air at the surface from high to low pressure, and convergence in a region of falling pressure owing to a lack of perfect balance between wind and pressure gradients. (iv) *Frontal Rain.* One air mass may be forced to rise over another (warm air over cool air—warm frontal), or one air mass may be lifted by another (cold air lifting up warm air—cold frontal). The warm front is characterized by continuous precipitation (drizzle), the cold front by showery conditions and sometimes thunderstorms.

Two other important methods of condensation are:—(i) *Contact or Conduction Cooling.* Warm air flowing over a cold surface may cause fog or drizzle, occurring mainly on coastal lands in winter and adjacent sea areas in summer. (ii) *Radiation Cooling.* Under anticyclonic conditions this process of cooling may result in radiation fog.

17. *Influences affecting Australian Climate.*—(i) *General.* Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, low-lying lands on the north coast of New South Wales, which originally were seldom subject to frosts, have, with the denudation of the surrounding hills from forests, experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the highlands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.

(ii) *Influence of Forest on Climate.* As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface by evaporation, and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees, a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and "gullies," watercourses supplied mainly by melting snow would be subject to alternative periods of flooding and dryness. This is borne out in the case of the inland rivers, the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.

(iii) *Direct Influence of Forests on Rainfall.* Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall has not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States of America, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

18. *Rainfall and Temperatures, Various Cities.*—The Official Year Book No. 34, p. 28, shows rainfall and temperature for various important cities throughout the world, and for the Australian capitals.

19. *Climatological Tables.*—The averages and extremes for a number of climatological elements, which have been determined from long series of observations at the Australian capitals up to and including the year 1948, are given on pp. 64–70.

NOTE.—The following points apply throughout:—

- (i) Where records are available, mean or average values have been calculated on a standard period of 30 years from 1911 to 1940.
- (ii) Extreme values have been extracted from all available years of actual record, but the number of years quoted does not include intervening periods when observations were temporarily discontinued.

CLIMATOLOGICAL DATA : CANBERRA, AUSTRALIAN CAPITAL TERRITORY.

LAT. 35° 18' S., LONG. 149° 06' E. HEIGHT ABOVE M.S.L. 1,906 Ft.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month	Bar. corrected to 32° F. M. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 20 feet.)				Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m. and 3 p.m. (c)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day. (m.p.h.)	High-est Gust Speed (miles per hour).	Prevailing Direction.				
					9 a.m.	3 p.m.			
No. of years of observations.	18	20	20	(b)	21	21	20	12	18
January ..	29.835	5.1	14.9 23/33	—	NW	NW	8.84	1.0	4.7
February ..	29.901	4.5	15.3 24/33	—	E	NW	6.95	2.9	4.7
March ..	30.009	4.2	18.2 28/42	—	E	NW	5.58	0.0	4.9
April ..	30.066	3.9	18.6 8/45	—	NW	NW	3.41	0.4	5.4
May ..	30.158	3.2	12.6 3/30	—	NW	NW	2.08	0.1	5.3
June ..	30.141	3.8	16.1 2/30	—	NW	NW	1.33	0.1	6.0
July ..	30.122	3.6	23.4 7/31	—	NW	NW	1.33	0.0	5.5
August ..	30.064	4.4	15.7 25/36	—	NW	NW	1.88	0.1	5.4
September ..	30.038	4.8	17.4 28/34	—	NW	NW	3.09	0.5	5.0
October ..	29.969	4.6	12.4 27/40	—	NW	NW	4.79	0.7	5.1
November ..	29.899	5.0	17.2 28/42	—	NW	NW	6.19	1.3	5.5
December ..	29.837	5.1	16.1 11/38	—	NW	NW	7.99	1.1	5.1
Year { Totals ..	—	—	—	—	—	—	53.46	8.2	—
Averages ..	30.003	4.3	—	—	NW	NW	—	—	5.3
Extremes ..	—	—	23.4 7/7/31	—	—	—	—	—	—

(a) Scale 0-10.

(b) No record.

TEMPERATURE AND SUNSHINE.

Month.	Mean Tempera- ture (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	21	21	21	21	21	21	(a)	21	19
January ..	82.8	56.2	69.5	107.4 11/39	39.5 8/38	67.9	—	32.4 (b)	8.1
February ..	81.1	56.2	68.7	99.3 13/33	35.0 (c)	64.3	—	21.5 23/13	7.6
March ..	76.1	52.2	64.1	99.1 6/38	36.5 21/32	62.6	—	26.4 26/35	7.3
April ..	66.5	45.2	55.9	89.7 6/38	29.0 29/34	60.7	—	19.0 18/44	6.6
May ..	59.6	38.7	49.2	72.6 1/36	22.5 9/29	50.1	—	15.6 (d)	5.2
June ..	52.5	35.2	43.8	61.0 (e)	18.1 20/35	42.9	—	8.9 25/44	4.3
July ..	51.7	33.6	42.7	63.5 16/34	20.0 (f)	43.5	—	10.8 9/37	4.8
August ..	55.1	35.5	45.3	70.5 28/34	21.0 3/29	49.5	—	10.1 6/44	5.8
September ..	61.2	38.9	50.1	81.5 16/34	25.2 6/46	56.3	—	13.0 6/45	7.2
October ..	67.6	44.0	55.8	90.0 13/46	29.0 24/28	61.0	—	18.2 2/45	7.8
November ..	73.7	49.3	61.5	101.4 19/44	32.2 11/36	69.2	—	25.9 6/40	7.9
December ..	79.7	53.6	66.7	103.5 27/38	36.0 24/28	67.5	—	30.2 (g)	8.1
Year { Averages ..	67.3	44.9	50.1	—	—	—	—	—	6.7
Extremes ..	—	—	—	107.4	18.1	89.3	—	8.9	—
				11/1/39	20/6/35			25/6/44	

(a) No record.

(b) 8/38 and 18/43.

(c) 22 and 23/31.

(d) 13/37 and 15/46.

(e) 3/27 and

28/30.

(f) 19/29, 9/37 and 27/43.

(g) 2/39 and 20/48.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (Inches)	Rel. Hum. (%) at 9 a.m.				Rainfall (Inches).				Fog.
		Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of years over which observation extends.	20	20	20	20	21	21	21	21	21	17
January ..	0.372	53	66	39	2.15	7	6.69 1941	0.02 1932	2.03 20/37	0.0
February ..	0.300	52	71	38	1.1	6	6.03 1918	0.01 1933	3.21 17/28	0.0
March ..	0.372	65	76	48	1.79	6	5.22 1932	0.01 1940	1.82 15/32	0.3
April ..	0.316	71	81	54	2.16	7	3.75 1935	0.07 1942	2.52 9/45	0.7
May ..	0.253	79	87	67	1.70	7	6.13 1948	0.06 1935	3.88 3/48	4.0
June ..	0.214	82	90	72	1.68	9	6.09 1931	0.18 1944	1.65 24/31	5.4
July ..	0.198	81	87	73	1.55	10	4.09 1933	0.27 1940	2.02 13/33	4.6
August ..	0.211	75	88	60	1.07	11	4.71 1930	0.36 1941	2.07 12/20	1.8
September ..	0.244	63	78	48	1.30	9	3.04 1937	0.13 1916	1.75 3/47	0.8
October ..	0.270	59	72	46	2.30	10	6.59 1934	0.34 1940	2.51 25/34	0.2
November ..	0.304	54	67	38	1.97	8	4.32 1946	0.28 1936	1.78 7/27	0.1
December ..	0.340	51	70	37	2.02	8	8.80 1947	0.16 1938	2.29 28/29	0.0
Year { Totals ..	—	—	—	—	22.91	98	—	—	—	17.9
Averages ..	0.275	66	—	—	—	—	—	—	—	—
Extremes ..	—	90	37	—	—	—	8.80 12/47	0.01 2/33/3/40	3.88 3/5/48	—

CLIMATOLOGICAL DATA : PERTH, WESTERN AUSTRALIA.

LAT. 31° 57' S., LONG. 115° 51' E. HEIGHT ABOVE M.S.L. 210 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Stan- dard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 71 feet.)					Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m. (a)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day. (m.p.h.)	High- est Gust Speed (miles per hour).	Prevailing Direction					
					9 a.m.	3 p.m.				
No. of years of observations.	30(b)	30(b)	50	36	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)
January ..	29.897	13.8	33.2 27/98	49	E	SSW	10.37	2	2.9	14
February ..	29.922	13.5	27.1 6/08	50	ENE	SSW	8.63	2	3.1	13
March ..	29.976	12.8	27.1 6/13	66	E	SSW	7.52	2	3.5	12
April ..	30.071	10.7	39.8 25/00	61	ENE	SSW	4.62	2	4.2	6
May ..	30.062	10.6	34.4 29/32	73	NE	WSW	2.80	3	5.4	6
June ..	30.068	10.6	38.1 17/27	80	N	NW	1.82	2	5.9	5
July ..	30.082	11.2	42.3 20/26	73	NNE	W	1.76	2	5.6	5
August ..	30.084	11.8	40.3 15/03	77	N	WNW	2.37	2	5.6	6
September ..	30.073	11.8	36.0 11/05	75	ENE	SSW	3.44	1	4.9	8
October ..	30.033	12.6	33.7 6/16	61	SE	SW	5.38	1	4.8	8
November ..	29.989	13.4	32.4 18/97	63	E	SW	7.65	2	3.9	9
December ..	29.923	13.9	32.3 6/22	64	E	SSW	9.69	2	3.2	13
Year { Totals ..	—	—	—	—	—	—	66.05	23	—	108
{ Averages	30.015	12.2	—	—	E	SSW	—	—	4.4	—
{ Extremes	—	—	42.3 20/7/26	80	—	—	—	—	—	—

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	52	52	52	50	50	30(a)
January	84.6	63.3	73.9	110.2 12/34	48.6 20/25	61.6	177.3 22/14	39.5 20/25	10.4
February	85.1	63.5	74.3	112.2 8/33	47.7 1/02	64.5	173.7 4/34	39.8 1/13	9.8
March	81.3	61.5	71.4	106.4 14/22	45.8 8/03	60.6	167.0 19/18	36.7 8/03	8.8
April	76.3	57.4	66.8	99.7 9/10	39.3 20/14	60.4	157.0 8/16	31.0 20/14	7.5
May	69.0	52.8	60.9	90.4 2/07	34.3 11/14	56.1	146.0 4/25	25.3 11/14	5.7
June	64.4	49.8	57.1	81.7 2/14	35.0 30/20	46.7	135.5 9/14	26.3 11/37	4.8
July	62.8	48.0	55.4	76.4 21/21	34.2 7/16	42.2	133.2 13/15	25.1 30/20	5.4
August	63.8	48.4	56.1	82.0 21/40	35.3 31/08	46.7	145.1 29/21	26.7 24/35	6.0
September ..	66.8	50.4	58.6	90.9 30/18	38.5 15/47	52.4	153.6 29/16	29.2 21/16	7.2
October	69.7	52.6	61.1	95.3 30/22	40.0 16/31	55.3	157.5 31/36	29.8 16/31	8.1
November ..	76.7	57.3	67.0	104.6 24/13	42.0 1/04	62.6	167.0 30/25	35.5 (b)	9.6
December ..	81.2	60.0	71.0	107.9 20/04	48.0 2/10	59.9	168.8 11/27	39.0 12/20	10.4
Year { Averages	73.5	55.5	64.5	—	—	—	—	—	7.8
Extremes	—	—	—	112.2 8/2/33	34.2 7/7/16	78.0	177.3 22/1/14	25.1 30/7/20	—

(a) Standard 30 years' normal (1911-1940).

(b) 6/10 and 14/12.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).					Fog.
		Mean. 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of years over which observation extends.	30(a)	30(a)	52	52	30(a)	30(a)	73	73	73	30(a)
January	0.438	51	61	41	0.33	3	2.17 1879	Nil (b)	1.74 27/79	0
February	0.434	51	65	43	0.50	3	2.98 1915	Nil (b)	1.63 26/15	0
March	0.432	57	66	46	0.90	5	5.71 1934	Nil (b)	3.03 9/34	0
April	0.397	61	73	51	1.75	8	5.85 1926	Nil 1920	2.62 30/04	1
May	0.365	70	81	61	5.14	15	12.13 1879	0.98 1903	3.00 17/42	2
June	0.337	75	83	68	7.55	17	18.75 1945	2.16 1877	3.90 10/20	2
July	0.322	76	84	69	7.08	19	12.28 1926	2.42 1876	3.00 4/81	2
August	0.316	71	81	62	5.78	19	12.53 1945	0.46 1902	2.91 14/45	1
September ..	0.341	66	75	58	3.37	15	7.84 1923	0.34 1916	1.82 4/31	0
October	0.345	60	75	52	2.30	12	7.87 1890	0.15 1946	1.73 3/33	0
November ..	0.374	52	63	41	0.75	7	2.78 1916	Nil 1891	1.40 15/48	0
December ..	0.409	51	63	44	0.54	5	3.05 1888	Nil (c)	1.72 1/88	0
Year { Totals	—	—	—	—	35.99	128	—	—	—	8
Averages ..	0.370	62	—	—	—	—	—	—	—	—
Extremes ..	—	—	84	41	—	—	18.75 6/1945	Nil Various months	3.90 10/6/20	—

(a) Standard 30 years' normal (1911-1940).

(b) Various years.

(c) 1886 and 1924.

CLIMATOLOGICAL DATA : ADELAIDE, SOUTH AUSTRALIA.

LAT. 34° 56' S., LONG. 138° 35' E. HEIGHT ABOVE M.S.L. 140 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mm. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 75 feet.)				Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m.(a)	No. of Clear Days.	
		Average Miles per Hour.	Highest Mean Speed in One Day. (m.p.h.)	Highest Gull-Speed (miles per hour).	Prevailing Direction.					
					9 a.m.					3 p.m.
No. of years of observations.	30(h)	30(h)	71	32	30(h)	30(h)	30(h)	30(h)	30(h)	
January ..	29.917	9.9	31.6 19/99	72	SW	SW	9.27	2.3	3.6 12.9	
February ..	29.953	8.8	28.8 22/96	64	NE	SW	7.56	2.0	3.7 11.2	
March ..	30.037	8.3	26.2 9/12	63	S	SW	6.39	1.8	4.0 10.6	
April ..	30.119	8.0	32.2 10/96	81	NE	SW	3.78	1.5	5.2 7.2	
May ..	30.131	8.1	31.7 9/80	63	NE	NW	2.27	1.3	5.8 4.9	
June ..	30.119	8.3	31.3 12/78	67	NE	N	1.37	1.3	6.1 4.1	
July ..	30.111	8.5	28.1 25/82	60	NE	NW	1.34	1.5	6.0 4.3	
August ..	30.084	9.2	32.2 31/97	57	NE	SW	1.99	2.0	5.5 5.6	
September ..	30.050	9.2	30.0 2/87	69	NNE	SW	3.05	2.0	5.3 5.8	
October ..	30.007	9.8	32.0 28/98	60	NNE	SW	5.03	2.8	5.3 5.7	
November ..	29.090	9.9	32.2 7/48	79	SW	SW	6.89	3.3	4.9 7.2	
December ..	29.922	9.9	28.1 12/91	75	SW	SW	8.74	2.2	4.2 9.5	
Year { Totals ..	—	—	—	—	—	—	57.68	24.0	89.0	
Year { Averages ..	30.037	9.0	—	—	NE	SW	—	—	5.0	
Year { Extremes ..	—	—	32.2 (c)	81	—	—	—	—	—	

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

(c) 10/4/1896, 31/8/1897 and 7/11/1948.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	92	92	92	54(b)	88	30(a)
January	84.8	61.0	72.9	117.7 12/39	45.1 21/84	72.6	180.0 18/82	36.5 14/79	10.0
February	85.7	61.8	73.7	113.0 12/99	45.5 23/18	68.1	170.5 13/80	35.8 23/80	9.3
March	81.3	59.1	70.2	110.5 9/34	43.9 21/33	66.6	174.0 17/83	32.1 21/33	7.9
April	73.0	54.4	63.7	98.6 5/38	39.6 15/59	59.0	155.0 1/83	30.2 16/17	6.0
May	66.8	50.8	58.8	80.5 4/21	36.0 (c)	52.6	148.2 12/70	25.6 10/28	4.8
June	61.0	46.6	53.8	76.0 23/65	32.5 (d)	43.5	138.8 18/79	21.0 24/44	4.2
July	59.9	45.4	52.7	74.0 11/66	32.0 24/08	42.0	134.5 26/90	22.1 30/49	4.3
August	62.3	46.2	54.3	85.0 31/11	32.3 17/50	52.7	140.0 31/02	22.8 11/20	5.4
September	66.8	47.3	57.5	91.3 1/41	32.7 1/5	58.6	160.5 23/82	28.0 25/27	6.3
October	72.5	51.7	62.1	102.9 21/22	36.0 -1/57	66.9	162.0 30/21	27.8 (e)	7.3
November	78.1	55.4	66.7	113.5 21/65	40/8 2/60	72.2	166.0 20/78	31.5 2/60	8.6
December	82.6	58.9	70.7	114.6 29/31	43.0 (f)	71.6	175.7 7/99	32.5 4/84	9.5
Year { Averages	72.9	53.3	63.1	—	—	—	—	—	7.0
Year { Extremes	—	—	—	117.7	32.0	85.7	180.0	21.0	—

(a) Standard 30 years' normal (1911-1940).

(b) Records incomplete, 1931-34. Discontinued, 1934.

(c) 26/1895.

(d) 25/1896 and 24/1911.

(e) 1/1911 and 2/1918.

(f) 16/1891 and 1/1900.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure	Rel. Hum. (%) 9 a.m.				Rainfall (inches).					Fog.
	(inches)	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain	Greatest Monthly.	Least Monthly.	Greatest in One Day.		
	Mean 9 a.m.										
No. of years over which observation extends.	30(a)	30(a)	81	81	30(a)	30(a)	110	110	110	30(a)	
January	0.327	39	59	29	0.76	5	4.00 1850	Nil (b)	2.30 2/89	0.0	
February	0.332	41	50	30	1.10	5	6.09 1925	Nil (b)	5.57 7/25	0.0	
March	0.332	44	58	29	0.87	5	4.60 1878	Nil (b)	3.50 5/78	0.0	
April	0.329	55	72	37	1.45	10	6.78 1853	Nil 1945	3.15 5/60	0.0	
May	0.313	64	76	49	2.49	13	7.75 1875	0.10 1934	2.75 1/33	0.6	
June	0.294	75	84	67	2.93	15	8.58 1916	0.42 1886	2.11 1/20	1.1	
July	0.282	75	87	66	2.40	16	5.38 1865	0.37 1800	1.75 10/65	1.4	
August	0.282	68	78	51	2.53	16	6.24 1852	0.33 1944	2.23 19/51	0.4	
September	0.289	59	72	44	2.39	13	5.83 1923	0.45 1806	1.59 20/23	0.2	
October	0.287	48	67	39	1.54	10	4.30 1948	0.17 1914	2.24 16/08	0.0	
November	0.292	41	57	31	1.22	8	4.10 1934	0.04 1885	2.08 7/34	0.0	
December	0.322	40	50	31	1.27	6	3.98 1861	Nil 1904	2.42 23/13	0.0	
Year { Totals	—	—	—	—	21.09	122	—	—	—	3.7	
Year { Averages	0.304	52	—	—	—	—	—	—	—	—	
Year { Extremes	—	—	87	29	—	—	8.58 6/1916	Nil (c)	5.57 7/25	—	

(a) Standard 30 years' normal (1911-1940).

(b) Various years.

(c) December to April, various years.

CLIMATOLOGICAL DATA : BRISBANE, QUEENSLAND.

LAT. 27° 28' S., LONG. 153° 2' E. HEIGHT ABOVE M.S.L. 134 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. M'n. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 105 feet.)						Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m. (a)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day. (m.p.h.)	Highest Gust Speed (miles per hour).	Prevailing Direction.						
					9 a.m.	3 p.m.					
No. of years of observations.	30(b)	30(b)	34	34	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.865	6.8	19.7 23/47	51	SE	NE	6.74	9.8	5.7	3.5	
February ..	29.912	7.0	21.0 5/31	67	SE	NE	5.49	6.5	5.6	2.4	
March ..	29.975	6.5	20.3 1/29	50	S	E	5.03	5.9	5.1	5.4	
April ..	30.035	5.9	16.7 3/25	57	S	E	4.05	5.0	4.3	7.8	
May ..	30.083	5.8	17.9 17/26	48	SW	SE	3.09	4.1	4.3	8.3	
June ..	30.091	5.7	19.0 14/28	58	SW	W & SW	2.45	2.9	4.4	9.2	
July ..	30.090	5.6	15.0 2/23	52	SW	W & SW	2.69	2.8	3.8	12.4	
August ..	30.105	5.8	14.8 4/35	56	SW	NE	3.51	3.8	3.1	13.1	
September ..	30.067	5.9	16.1 1/48	57	SW	NE	4.51	5.8	3.3	13.0	
October ..	30.019	6.3	15.7 1/41	62	S	NE	5.81	7.1	4.2	8.5	
November ..	29.958	6.7	15.5 10/28	59	SE & N	NE	6.32	9.5	4.9	5.9	
December ..	29.890	7.0	19.5 15/26	79	SE	NE	7.02	10.6	5.3	3.8	
Year {	Totals ..	—	—	—	—	—	56.73	73.8	—	93.3	
	Averages	30.007	6.3	—	—	SW	NE	—	—	4.5	—
	Extremes	—	—	21.0 5/2/31	79	—	—	—	—	—	—

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	62	62	62	50(b)	62	30(a)
January ..	85.5	69.1	77.3	109.8 26/40	58.8 4/93	51.0	169.0 2/37	49.9 4/93	7.6
February ..	84.6	68.7	76.6	105.7 21/25	58.5 23/31	47.2	165.2 6/10	49.1 22/31	7.4
March ..	82.3	66.2	74.3	99.4 5/19	52.4 29/13	47.0	162.5 6/39	45.4 29/13	7.0
April ..	79.1	61.5	70.3	95.2 (c)	44.4 25/25	50.8	153.8 11/16	36.7 24/25	7.1
May ..	73.7	55.6	64.7	90.3 21/23	41.3 24/99	49.0	147.0 1/10	29.8 8/97	6.6
June ..	69.4	51.5	60.5	88.9 19/18	36.3 29/08	52.6	136.0 3/18	25.4 23/88	6.3
July ..	68.6	49.4	59.0	84.3 23/46	30.1 (d)	48.2	146.1 20/15	23.9 11/90	6.8
August ..	71.1	50.0	60.6	91.0 14/46	37.4 6/87	53.6	141.9 20/17	27.1 9/99	7.9
September ..	75.5	54.8	65.1	100.9 22/43	40.7 1/96	60.2	155.5 26/03	30.4 1/89	8.2
October ..	79.2	60.3	69.8	101.4 18/93	43.3 3/99	58.1	157.4 31/18	34.9 8/89	8.4
November ..	82.3	64.6	73.4	106.1 18/13	48.5 2/05	57.6	162.3 7/89	38.8 1/05	8.2
December ..	84.5	67.5	76.0	105.9 26/93	50.4 13/12	49.5	165.9 28/42	49.1 3/94	8.2
Year { Averages ..	78.0	59.9	69.0	—	—	—	—	—	7.5
Extremes ..	—	—	—	109.8 26/1/40	36.1 (d)	73.7	169.0 2/1/37	23.9 11/7/90	—

(a) Standard 30 years' normal (1911-1940).

(b) From 1887 to March, 1947, excluding 1927 to 1936.

(c) 9/1896 and 5/1903.

(d) 12/7/1894 and 2/7/1896.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.			Rainfall (inches).					Fog.
		Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of years over which observation extends.	30(a)	30(a)	62	62	30(a)	30(a)	97	97(b)	97	30(a)
January ..	0.636	66	79	53	5.72	12	27.72 1895	0.32 1919	18.31 21/87	0.6
February ..	0.644	69	82	55	5.47	12	40.39 1893	0.58 1849	10.61 6/31	0.9
March ..	0.606	72	85	56	4.97	14	34.04 1870	Nil 1849	11.18 14/08	1.6
April ..	0.512	71	80	56	3.68	11	15.28 1867	0.04 1944	5.46 5/33	4.0
May ..	0.420	71	85	59	2.35	9	13.85 1876	Nil 1846	5.62 9/79	5.4
June ..	0.357	73	84	54	2.75	8	14.03 1873	Nil 1847	6.41 15/48	4.5
July ..	0.331	71	81	53	1.88	8	8.46 1889	Nil 1841	3.54 (e)	4.9
August ..	0.338	67	80	55	1.07	7	14.67 1879	Nil (d)	4.89 12/87	5.9
September ..	0.396	62	76	47	1.69	7	5.43 1886	0.10 1907	2.46 2/94	2.8
October ..	0.459	59	72	48	2.27	8	9.99 1882	0.14 1900	3.75 3/27	1.6
November ..	0.533	61	72	45	4.00	10	12.40 1917	Nil 1842	4.46 16/86	0.7
December ..	0.589	62	70	51	4.24	11	17.36 1942	0.35 1865	6.60 28/71	0.4
Year { Totals ..	—	—	—	—	40.09	117	—	—	—	33.3
Averages	0.485	67	—	—	—	—	—	—	—	—
Extremes	—	—	85	45	—	—	40.39 2/1893	Nil (e)	18.31 21/1/87	—

(a) Standard 30 years' normal (1911-1940).

(b) Records incomplete for various years between 1846 and 1859.

(c) 15/1876 and 16/1889.

(d) 1862, 1869, 1880.

(e) Various months in various years.

CLIMATOLOGICAL DATA : SYDNEY, NEW SOUTH WALES.

LAT. 33° 52' S., LONG. 151° 12' E. HEIGHT ABOVE M.S.L. 138 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Wind. (Height of Anemometer 58 feet.)										
Month.	Bar. corrected to 32° F. Mns. Sea Level and Stan- dard Gravity from 9 a.m. and 3 p.m. readings.	Average Miles per Hour.	Highest Mean Speed in One Day. (m.p.h.)	High- est Gust Speed (miles per hour).	Prevailing Direction.		Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m. (a)	No. of Clear Days.
					9 a.m.	3 p.m.				
No. of years of observations.	30(b)	26(c)	35 (d)	29(e)	26(c)	26(c)	26(c)	20(f)	30(b)	30(b)
January ..	29.875	8.9	24.9 2/22	63	S	ENE	5.71	5.9	5.7	4.8
February ..	29.942	8.1	20.1 14/18	61	NE	ENE	4.68	4.1	5.5	5.4
March ..	30.009	7.5	20.7 10/44	58	W	ENE	4.05	3.5	5.3	5.8
April ..	30.063	7.0	23.4 19/27	72	W	NE	2.91	2.9	5.0	7.0
May ..	30.098	6.8	19.6 2/26	63	W	S	2.17	1.8	4.9	7.4
June ..	30.078	7.1	24.5 17/14	67	W	W	1.61	1.7	4.8	8.3
July ..	30.070	7.2	26.6 6/31	68	W	W	1.69	1.5	4.5	10.1
August ..	30.060	7.4	24.0 3/21	68	W	NE	2.30	2.6	3.9	11.1
September ..	30.018	8.0	22.3 19/17	70	W	NE	3.00	3.1	4.2	10.0
October ..	29.976	8.2	21.1 18/44	95	W	ENE	4.17	4.5	4.9	7.4
November ..	29.935	8.5	22.6 14/30	71	W & E	ENE	4.97	5.0	5.5	5.7
December ..	29.881	8.9	24.9 10/20	75	S	ENE	5.64	6.3	5.8	4.8
Year { Totals ..	—	—	—	—	—	—	42.90	42.9	—	87.8
Year { Averages	30.000	7.8	—	—	W	NE	—	—	5.0	—
Year { Extremes	—	—	26.6 6/7/31	95	—	—	—	—	—	—

(a) Scale 0-10.
(e) 1917-1948.(b) Standard 30 years' normal (1911-1940).
(f) 1921-1940.

(c) 1915-1940.

(d) 1914-1948.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.	
No. of years over which observation extends.	30(a)	30(a)	30(a)	90	90	90	84	90	20(b)
January	78.6	65.1	71.8	113.6 14/39	51.2 14/65	62.4	164.3 26/15	43.7 6/25	7.4
February	78.7	65.5	72.1	107.8 8/26	49.3 28/63	58.5	168.3 14/39	42.8 22/33	7.3
March	76.6	62.9	69.8	102.6 3/69	48.8 14/86	53.8	158.3 10/26	39.9 17/13	6.5
April	72.0	57.7	64.9	91.4 1/36	44.6 27/64	46.8	144.1 10/77	33.3 24/09	6.0
May	67.0	52.4	59.7	86.0 1/19	40.2 22/59	45.8	129.7 1/96	29.3 25/17	5.7
June	62.8	48.1	55.5	80.4 11/31	35.7 22/32	44.7	125.5 2/23	28.0 22/32	5.4
July	61.8	46.1	51.1	78.3 22/26	35.9 12/30	42.4	124.7 19/77	24.3 4/93	6.1
August	64.3	47.6	56.0	82.8 12/46	36.8 3/72	46.0	149.0 30/78	26.1 4/09	7.0
September .. .	68.3	51.1	59.0	92.3 27/19	40.4 15/50	51.0	142.2 12/75	30.1 17/05	7.3
October	71.7	55.9	63.8	99.4 4/42	42.2 6/27	57.2	152.2 20/33	32.7 9/05	7.5
November .. .	74.5	59.8	67.1	104.5 6/46	45.8 1/05	61.3	158.5 28/99	36.0 6/06	7.7
December .. .	76.9	63.2	70.1	107.5 31/04	48.4 3/24	59.1	164.5 27/89	41.4 3/24	7.3
Year { Averages	71.1	56.3	63.7	—	—	—	—	—	6.8
Year { Extremes	—	—	—	113.6 14/1/39	35.7 22/6/32	77.9	168.3 14/2/39	24.0 4/7/93	—

(a) Standard 30 years' normal (1911-1940).

(b) 1921-1940 (different exposure prior to 1921).

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pres- sure (inches)	Rel. Hum. (%) at 9 a.m.		Rainfall (inches).					Fog.		
		Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean No. of Days of Fog.
No. of years over which observation extends.	30(a)	30(a)	73	73	30(a)	30(a)	90	90	90	20(b)	
January ..	0.537	65	78	58	3.86	13	15.26 1911	0.25 1932	7.08 13/11	0.5	
February ..	0.500	68	81	60	1.15	12	18.56 1873	0.12 1939	8.00 25/73	0.9	
March ..	0.537	71	85	62	4.44	13	20.52 1942	0.42 1870	11.05 28/42	2.1	
April ..	0.441	73	87	63	5.65	14	24.49 1861	0.06 1868	7.52 29/60	2.9	
May ..	0.362	75	90	63	4.08	12	23.03 1919	0.18 1860	8.36 28/89	4.5	
June ..	0.303	76	89	65	3.68	11	16.30 1885	0.19 1904	5.17 16/84	4.4	
July ..	0.282	74	88	63	4.89	12	13.21 1900	0.10 1946	7.80 7/31	3.3	
August ..	0.288	68	84	54	2.41	10	14.89 1899	0.04 1885	5.33 2/60	2.9	
September ..	0.325	62	79	49	2.77	11	14.05 1879	0.08 1882	5.60 10/79	0.9	
October ..	0.378	60	77	46	2.86	11	11.13 1916	0.21 1867	6.37 13/02	0.7	
November ..	0.433	60	79	42	2.54	11	9.88 1865	0.07 1915	4.23 19/00	0.7	
December ..	0.501	63	77	51	3.63	13	15.82 1920	0.23 1913	4.75 13/10	0.3	
Year { Totals ..	—	—	—	—	44.80	143	—	—	—	24.1	
Year { Averages ..	0.393	68	—	—	—	—	—	—	—	—	
Year { Extremes ..	—	—	90	42	—	—	24.49 4/1861	0.04 8/1885	11.05 28/3/42	—	

(a) Standard 30 years' normal (1911-1940).

(b) 1921-1940.

CLIMATOLOGICAL DATA : MELBOURNE, VICTORIA.

LAT. 37° 49' S., LONG. 144° 58' E. HEIGHT ABOVE M.S.L. 114 Ft.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 93 feet.)					Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of (clouds, 9 a.m., 3 p.m., 9 p.m.) (a)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day. (m.p.h.)	Highest Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.	3 p.m.				
No. of years of observations.	30(b)	9(c)	36	25	30	30	30(b)	30(b)	30(b)	30(b)
January ..	29.897	8.8	21.1 27/41	66	S & SW	S	6.55	1.8	4.9	6.8
February ..	29.950	8.3	19.0 13/47	66	N & S	S	5.10	2.3	4.8	6.4
March ..	30.025	7.9	16.5 (d)	66	N	S	4.26	1.8	5.3	5.5
April ..	30.092	7.3	19.9 16/43	67	N	S	2.53	1.2	5.9	4.6
May ..	30.113	7.5	20.0 4/44	72	N	N	1.57	0.5	6.1	3.4
June ..	30.097	7.7	22.8 16/47	60	N	N	1.18	0.4	6.5	2.7
July ..	30.079	8.9	20.9 9/44	68	N	N	1.16	0.3	6.3	2.9
August ..	30.048	8.4	21.3 20/42	64	N	N	1.54	0.9	6.0	3.1
September ..	30.001	8.6	18.3 6/48	69	N & W	N & S	2.41	1.3	5.9	3.3
October ..	29.968	8.3	16.4 22/48	69	N	S	3.54	1.8	6.1	3.8
November ..	29.951	8.4	17.5 8/48	65	S & SW	S	4.62	2.3	6.0	3.6
December ..	29.896	8.6	18.9 1/34	61	S & SW	S	5.85	1.9	5.6	4.5
Year { Totals ..	—	—	—	—	—	—	40.31	16.5	—	50.6
Averages	30.010	8.2	—	—	N	S	—	—	5.8	—
Extremes	—	—	22.8 16/6/47	72	—	—	—	—	—	—

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

(c) Early records not comparable.

(d) 22/31 and 3/41.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.).			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.
	Mean	Max.	Min.	Highest.	Lowest.		Highest in Sun.	Lowest on Grass	
No. of years over which observation extends.	30(a)	30(a)	30(a)	93	93	93	86(b)	89	25(c)
January	77.7	56.9	67.3	114.1 13/39	42.0 28/85	72.1	178.5 14/62	30.2 28/85	7.6
February	78.6	58.0	68.3	109.5 7/01	40.2 24/24	69.3	167.5 15/70	30.9 6/91	7.4
March	74.9	55.2	65.1	107.0 11/40	37.1 17/84	69.9	164.5 1/68	28.9 (d)	6.7
April	67.9	50.8	59.3	94.8 5/38	34.8 24/88	60.0	152.0 8/61	25.0 23/97	5.0
May	62.0	46.9	54.5	83.7 7/05	29.9 29/16	53.8	142.6 2/59	21.1 26/16	4.1
June	56.8	43.8	50.3	72.2 1/07	28.0 11/66	44.2	129.0 11/61	19.9 30/29	3.5
July	56.2	42.6	49.4	69.3 22/26	27.0 21/69	42.3	125.8 27/80	20.5 12/03	3.8
August	58.7	43.7	51.2	77.0 20/85	28.3 11/63	48.7	137.4 29/69	21.3 14/02	4.6
September ..	63.3	46.0	54.7	88.6 28/28	31.0 3/40	57.6	142.1 20/67	22.8 8/18	5.5
October	67.9	48.7	58.3	98.4 24/14	32.1 3/71	66.3	154.3 28/68	24.8 22/18	5.8
November ..	71.3	51.8	61.5	105.7 27/94	36.5 2/96	69.2	159.6 29/65	24.6 2/96	6.3
December ..	75.4	55.3	65.3	110.7 15/76	40.0 4/70	70.7	170.3 20/69	33.2 1/04	7.0
Year { Averages ..	67.6	50.0	58.8	—	—	—	—	—	5.6
Extremes ..	—	—	—	114.1 13/1/39	27.0 21/7/69	87.1	178.5 14/1/62	19.9 30/6/29	—

(a) Standard 30 years' normal (1911-1940).

(b) Records discontinued, 1946.

(c) 1916-1940.

(d) 17/1884 and 20/1897.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapour Pressure (inches)	Rel. Hum. (%) at 9 a.m.			Rainfall (Inches).					Fog.
		Mean. 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of years over which observation extends.	30(a)	30(a)	41	41	30(a)	30(a)	93	93	93	30(a)
January	0.382	58	65	50	1.88	9	6.66 1941	0.01 1932	2.97 9/97	0.1
February	0.417	62	69	48	2.00	8	7.72 1939	0.03 1870	3.44 26/46	0.3
March	0.385	64	73	50	2.22	9	7.50 1911	0.14 1934	3.55 5/19	1.1
April	0.351	72	82	66	2.30	13	6.71 1907	Nil 1923	2.28 22/01	2.3
May	0.311	79	86	70	1.94	14	5.60 1942	0.14 1934	1.85 7/91	6.8
June	0.276	83	92	75	2.06	10	4.51 1859	0.73 1877	1.74 21/04	0.5
July	0.264	82	86	75	1.93	17	7.02 1891	0.57 1902	2.71 12/91	6.5
August	0.271	76	82	70	2.02	17	4.35 1939	0.48 1903	1.94 26/24	3.7
September	0.288	68	76	60	2.20	15	7.93 1916	0.52 1907	2.62 12/80	1.3
October	0.307	62	67	52	2.63	14	7.61 1869	0.29 1914	3.00 17/69	0.3
November	0.336	60	69	52	2.33	13	6.71 1916	0.25 1895	2.57 16/76	0.3
December	0.373	59	69	48	2.38	11	7.18 1863	0.11 1904	3.20 1/34	0.2
Year { Totals	—	—	—	—	25.89	156	—	—	—	29.4
Averages	0.323	69	—	—	—	—	—	—	—	—
Extremes	—	—	92	48	—	—	7.93 9/1916	Nil 4/1923	3.55 5/3/19	—

(a) Standard 30 years' normal (1911-1940).

CLIMATOLOGICAL DATA : HOBART, TASMANIA.

LAT. 42° 53' S., LONG. 147° 30' E. HEIGHT ABOVE M.S.L. 177 Ft.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. M'n. Sea level and Stan- dard Gravity from 9 a.m. and 3 p.m. readings.	Wind. (Height of Anemometer 40 feet.)					Mean Amount of Evaporation (inches).	No. of Days of Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., 9 p.m.(g)	No. of Clear Days.
		Average Miles per Hour.	Highest Mean Speed in One Day. (m.p.h.)	Highest Gust Speed (miles per hour).	Prevailing Direction.					
					9 a.m.	3 p.m.				
No. of years of observations.	30(b)	30(b)	58	58	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)
January ..	29.819	8.0	20.8 30/16	76	NNW	SSE	4.84	0.9	6.4	1.9
February ..	29.913	7.2	25.2 4/27	63	NNW	SSE	3.71	1.0	6.2	2.3
March ..	29.961	6.8	21.4 13/38	68	NW	SSE	3.10	1.2	6.1	2.4
April ..	29.997	6.7	22.2 27/26	74	NW	W	1.98	0.7	6.5	1.7
May ..	30.009	6.3	20.2 20/36	70	NNW	NW	1.37	0.4	6.1	2.4
June ..	29.986	6.2	23.7 27/20	71	NW	NW	0.91	0.4	6.2	2.4
July ..	29.958	6.5	20.8 19/35	78	NNW	NNW	0.94	0.3	6.1	2.0
August ..	29.906	6.8	25.5 19/26	87	NNW	NW	1.28	0.4	6.1	2.1
September ..	29.860	7.9	21.5 26/15	84	NNW	NW	1.97	0.7	6.3	1.5
October ..	29.833	8.2	19.2 8/12	74	NNW	SW	3.05	0.6	6.6	1.0
November ..	29.831	7.9	21.2 18/15	73	NNW	S	3.77	0.7	6.4	1.3
December ..	29.816	7.6	23.4 1/34	62	NNW	SSE	4.37	0.5	6.8	1.1
Year { Totals ..	—	—	—	—	—	—	31.29	7.8	—	22.1
Averages	29.907	7.2	—	—	NNW	W	—	—	6.3	—
Extremes	—	—	25.5 19/8/26	87	—	—	—	—	—	—

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (°Fahr.)			Extreme Shade Temperature (°Fahr.).		Extreme Range.	Extreme Temperature (°Fahr.).		Mean Daily Hours of Sunshine.	
	Mean	Min.	Mean	Highest.	Lowest.		Highest in Sun.	Lowest on Grass.		
No. of years over which observation extends.	30(a)	30(a)	30(a)	65(b)	65(b)	65(b)	57(c)	65(b)	28	
January	69.8	52.4	61.0	105.0	1/00	40.1 (d)	64.9	160.0 (e)	30.6 19/97	7.7
February	70.6	53.7	62.2	104.4	12/99	39.0 20/87	65.4	165.0 24/98	28.3 —/87	7.0
March	67.5	51.3	59.4	99.1	13/40	35.2 31/26	63.9	150.9 26/44	27.5 30/02	6.3
April	62.2	48.0	55.1	87.1	1/41	33.3 24/88	53.8	142.0 18/93	25.0 —/86	4.9
May	57.8	44.6	51.2	77.8	5/21	29.2 20/02	48.6	128.0 (f)	20.0 19/02	4.5
June	52.8	41.2	47.0	69.2	1/07	29.2 28/44	40.0	122.0 12/94	21.0 6/87	3.9
July	52.7	40.6	46.6	66.1	14/34	27.7 11/95	38.4	121.0 12/93	18.7 16/86	4.3
August	55.4	41.7	48.7	71.6	28/14	30.5 (g)	41.1	129.0 —/87	20.1 7/09	5.1
September .. .	59.0	43.7	51.4	81.7	23/26	31.0 16/97	50.7	138.0 23/93	18.3 16/26	5.9
October	62.5	46.1	54.3	92.0	24/14	32.0 12/89	60.0	156.0 9/93	23.8 (h)	6.2
November .. .	65.0	48.2	56.6	98.3	26/37	35.0 16/41	63.3	154.0 19/92	26.0 1/08	7.2
December .. .	67.9	51.3	59.6	105.2	30/07	38.0 3/06	67.2	161.5 10/39	27.2 —/86	7.3
Year { Averages ..	61.9	46.9	54.4	—	—	—	—	—	—	5.8
Extremes ..	—	—	—	105.2	30/12/97	27.7 11/7/95	77.5	165.0 24/2/98	18.3 16/9/26	—

(a) Standard 30 years' normal (1911-1940).

not comparable; records discontinued, 1946.

(b) Records 1855-1882 not comparable.

(c) Period 1934-1938

(d) 9/37 and 11/37.

(e) 5/86 and 13/05.

(f) —/89 and

—/93.

(g) 4/97 and 7/09.

(h) 1/86 and —/99.

HUMIDITY, RAINFALL AND FOG.

Month.	Vapor Pressure (inches)	Rel. Hum. (%) at 9 a.m.				Rainfall (inches).					Fog.
		Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days of Rain.	Greatest Monthly.	Least Monthly.	Greatest in One Day.	
No. of years over which observation extends.	30(a)	29	62	62	30(a)	30(a)	65(b)	65(b)	65(b)	27	
January	0.309	57	72	46	1.82	13	5.91 1893	0.17 1915	2.96 30/16	0.0	
February	0.342	62	77	48	1.68	10	4.96 1935	0.11 1914	2.18 5/38	0.0	
March	0.323	65	77	52	2.13	13	10.05 1946	0.29 1943	3.47 17/46	0.0	
April	0.290	69	84	58	2.31	14	8.50 1935	0.07 1904	5.02 20/09	0.2	
May	0.263	74	89	65	1.71	14	6.37 1905	0.14 1913	1.75 2/93	0.8	
June	0.233	78	91	68	2.25	16	8.15 1889	0.28 1886	4.11 13/89	0.7	
July	0.227	78	94	72	2.14	17	6.02 1922	0.51 1902	2.51 18/22	1.0	
August	0.232	72	92	61	1.82	18	6.32 1946	0.30 1892	2.28 14/90	0.4	
September .. .	0.240	64	85	58	1.90	17	4.47 1928	0.40 1891	1.57 24/85	0.0	
October	0.258	60	73	51	2.52	18	7.60 1947	0.39 1914	2.58 4/06	0.0	
November .. .	0.274	57	72	50	2.23	16	7.39 1885	0.33 1921	3.70 30/85	0.0	
December .. .	0.306	58	67	45	2.52	14	7.72 1916	0.17 1931	3.33 5/41	0.0	
Year { Totals	—	—	—	—	25.03	180	—	—	—	3.4	
Averages	0.271	65	—	—	—	—	—	—	—	—	
Extremes	—	—	94	45	—	—	10.05 3/1946	0.07 4/1904	5.02 20/4/09	—	

(a) Standard 30 years' normal (1911-1940).

(b) Records prior to 1883 not comparable.

§ 3. Standard Times in Australia.

Prior to 1895 the official time adopted in the several colonies was for most purposes the mean solar time of the capital city of each.

In November, 1892, an intercolonial conference of surveyors was held in Melbourne to consider, among other things, the advantages of introducing the system of standard time. In this system it was proposed to make the initial meridian that of Greenwich and to change local standard time by whole hours according to the longitude east or west of that of Greenwich. Thus for every difference of 15° in longitude a change of one hour would be required. The minutes and seconds would then be identical everywhere.

To give effect to this proposal it was suggested that Australia should be divided into three zones, the standard times for which should be respectively the mean solar times of the meridians of 120° , 135° and 150° E. longitude, thus giving standard times 8, 9 and 10 hours respectively ahead of Greenwich time. It was proposed that the 120° zone should comprise Western Australia, that the 135° zone should comprise South Australia and the Northern Territory, and that the 150° zone should comprise Queensland, New South Wales, Victoria and Tasmania.

The matter was also considered by several intercolonial postal conferences, and eventually in 1894 and 1895 legislation was enacted by each of the colonies in accord with the recommendations of the Surveyors' Conference of 1892.

In 1898 the South Australian legislature amended its earlier provision, and adopted the mean solar time of the meridian $142^{\circ} 30'$ E. longitude as the standard time for that colony, thus reducing the difference between the standard time of Adelaide and that of the capitals of the eastern colonies from an hour to half-an-hour. Particulars concerning these enactments are as follows :—

STANDARD TIMES IN AUSTRALIA.

State.		Date when Act came into Operation.	Meridian Selected.	Time Ahead of Greenwich.
				Hours.
New South Wales	..	1st February, 1895	150° E.	10
Victoria	..	1st February, 1895	150° E.	10
Queensland	..	1st January, 1895	150° E.	10
South Australia	..	1st February, 1895	135° E.	9
South Australia	..	1st May, 1899	$142^{\circ} 30'$ E.	$9\frac{1}{2}$
Western Australia	..	1st December, 1895	120° E.	8
Tasmania	..	1st September, 1895	150° E.	10

The standard time in the Australian Capital Territory is the same as in New South Wales, and in the Northern Territory the same as in South Australia.

Consequent upon the opening of the Trans-Australian Railway an arrangement was made by which the change of time between South Australia and Western Australia (namely, $1\frac{1}{2}$ hours) is divided into two changes of 45 minutes each. Going east from Kalgoorlie the first change is made at Rawlinna, 235.18 miles out, where the time is put forward by 45 minutes. The second change of the same amount is made at Tarcoola, 794.05 miles out. Thenceforward South Australian standard time is kept. The Commonwealth Observatory at Mount Stromlo, Canberra, and the State Observatories at Sydney, Adelaide, and Perth derive time by astronomical observations.

Time signals are originated by these Observatories and by the Postmaster-General's Research Laboratory, Melbourne. The latter participates with the Commonwealth Observatory in the Commonwealth Time Service.

CHAPTER III.

GENERAL GOVERNMENT.

§ 1. Scheme of Parliamentary Government.

1. *General*.—A brief account of the general legislative powers of the Commonwealth and States is given in preceding issues of the Official Year Book (*see* No. 13, pp. 927-951, and No. 22, p. 64).

2. *Powers and Functions of the Governor-General and of the State Governors*.—A detailed statement of the powers and functions of the Governor-General and of the State Governors appears in preceding issues of the Official Year Book (*see* No. 18, pp. 78-80).

3. *Governor-General and State Governors*.—The present Governor-General of the Commonwealth of Australia is His Excellency the Right Honorable William John McKell, who assumed office on 11th March, 1947, in succession to His Royal Highness the Duke of Gloucester.

The following is a list of the Governors of the various States of Australia in office in June, 1949 :—

New South Wales ..	Lieutenant-General JOHN NORTHCOTT, C.B., M.V.O.
Victoria	Major-General SIR WINSTON JOSEPH DUGAN, G.C.M.G., C.B., D.S.O.
Queensland ..	Lieutenant-General SIR JOHN DUDLEY LAVARACK, K.B.E., C.B., C.M.G., D.S.O.
South Australia ..	Lieutenant-General SIR CHARLES WILLOUGHBY MOKE NORRIE, K.C.M.G., C.B., D.S.O., M.C.
Western Australia ..	The Hon. SIR JAMES MITCHELL, G.C.M.G.
Tasmania ..	Admiral SIR HUGH BINNEY, K.C.B., D.S.O.

On 30th April, 1949 it was announced that General Sir Reginald Alexander Dallas Brooks, K.C.B., C.M.G., D.S.O., was appointed successor to Major-General Sir Winston Dugan, Governor of Victoria, whose term of office (extended) ended on 30th June, 1949.

4. *The Cabinet and Executive Government*.—(i) *General*. Both in the Commonwealth and in the States, executive government is based on the system which was evolved in Britain in the 18th century, and which is generally known as "Cabinet" or "responsible" government. Its essence is that the head of the State (His Majesty the King, and his representative, the Governor-General or Governor) should perform Governmental acts on the advice of his Ministers; that he should choose his principal

Ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the country; and that the Ministry should resign if it ceases to command a majority there.

The Cabinet system operates by means, chiefly, of constitutional conventions, customs or understandings, and of institutions that do not form part of the legal structure of the government at all. The constitutions of the Commonwealth and the States make fuller legal provision for the Cabinet system than the British Constitution does—for example, by requiring that Ministers shall be, or within a prescribed period become, members of the Legislature. In general, however, the legal structure of the executive government remains the same as it was before the establishment of the Cabinet system.

Formally, the executive power is vested in the Commonwealth in the Governor-General, and in the States in the Governor. In each case he is advised by an Executive Council, which, however, meets only for certain formal purposes, as explained below. The whole policy of a Ministry is, in practice, determined by the Ministers of State, meeting, without the Governor-General or Governor, under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

(ii) *The Cabinet.* This body does not form part of the legal mechanism of government. Its meetings are private and deliberative. The actual Ministers of the day are alone present, no records of the meetings are made public, and the decisions taken have, in themselves, no legal effect. In Australia, all Ministers are members of the Cabinet. As Ministers are the leaders of the party or parties commanding a majority in the popular House, the Cabinet substantially controls, in ordinary circumstances, not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the country. Even in summoning, proroguing or dissolving Parliament, the Governor-General or Governor is usually guided by the advice tendered him by the Cabinet, through the Prime Minister or Premier, though legally the discretion is vested in the Governor-General or Governor himself.

(iii) *The Executive Council.* This body is presided over by the Governor-General or Governor the members thereof holding office during his pleasure. All Ministers of State are *ex officio* members of the Executive Council. In the Commonwealth, and also in the States of Victoria and Tasmania, Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings; for it is an essential feature of the Cabinet system that attendance should be limited to the Ministers of the day. The meetings of the Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings, the decisions of the Cabinet are (where necessary) given legal form; appointments made; resignations accepted; proclamations issued, and regulations and the like approved.

(iv) *The Appointment of Ministers.* Legally, Ministers hold office during the pleasure of the Governor-General or Governor. In practice, however, the discretion of the King's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. Australian practice follows, broadly, that of the United Kingdom. When a Ministry resigns, the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command, a majority in the popular House, and to commission him, as Prime Minister or Premier, to "form a Ministry"—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the Official Year Book (*see* No. 6, p. 942). It may be added, however, that subsequent legislation has, in most of the States, obviated the necessity of responsible Ministers vacating their seats in Parliament on appointment to office.

(v) *Ministers in Upper and Lower Houses.* The following table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in June, 1949 :—

AUSTRALIAN PARLIAMENTS : MINISTERS IN UPPER OR LOWER HOUSES, JUNE, 1949.

Ministers with Seats in—	C'wealth. (a)	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House ..	5	2	4	(b)	2	2	..	15
The Lower House ..	14	13	8	11	4	8	9	67
Total ..	19	15	12	11	6	10	9	82

(a) For particulars of Government in office following results of 1949 elections see § 4.2 (c) following.
(b) Abolished in 1922.

(vi) *Ministers of State.* (a) *Commonwealth.* A statement showing the names of Ministers of State who have held office from the inauguration of the Commonwealth Government to 1925 will be found in Official Year Book No. 18, pp. 82 and 83. The names of the present Ministers will be found on pages 101 and 102. The names of those who have held office from 1st April, 1925 to 31st December, 1949 are shown in the following table.

COMMONWEALTH MINISTERS OF STATE, 1st APRIL, 1925 TO 31st DECEMBER, 1949.

PRIME MINISTER.			ATTORNEY-GENERAL.		
Name.	From—	To—	Name.	From—	To—
Hon. S. M. Bruce, M.C.(a)	9.2.23	22.10.29	Hon. L. E. Groom(i) ..	21.12.21	18.12.25
Hon. J. H. Scullin(b) ..	22.10.29	6.1.32	Hon. J. G. Latham, C.M.G., K.C.(j) ..	18.12.25	22.10.29
Hon. J. A. Lyons(c) ..	6.1.32	(d) 7.4.39	Hon. F. Brennan ..	22.10.29	0.1.32
Rt. Hon. Sir E. C. G. Page, G.C.M.G.(e) ..	7.4.39	26.4.39	Rt. Hon. J. G. Latham, C.M.G., K.C.(j) ..	6.1.32	12.10.34
Rt. Hon. R. G. Menzies, K.C. ..	26.4.39	29.8.41	Hon. R. G. Menzies, K.C. (k) ..	12.10.34	20.3.39
Hon. A. W. Fadden(f) ..	29.8.41	7.10.41	Rt. Hon. W. M. Hughes, K.C.(l) ..	20.3.39	7.10.41
Hon. J. Curtin(f) ..	7.10.41	(d) 6.7.45	Hon. H. V. Evatt, LL.D., D.Litt., K.C.(e) ..	7.10.41	19.12.49
Rt. Hon. F. M. Forde ..	6.7.45	13.7.45	Hon. J. A. Spicer, K.C. ..	19.12.49	(h)
Hon. J. B. Chifley(g)(q)	13.7.45	10.12.49			
Rt. Hon. R. G. Menzies, K.C. ..	19.12.49	(h)			
TREASURER.			EXTERNAL AFFAIRS.		
Name.	From—	To—	Name.	From—	To—
Hon. E. C. G. Page(n) ..	9.2.23	22.10.29	Hon. S. M. Bruce, M.C. (a) (n) ..	9.2.23	22.10.29
Hon. E. G. Theodore ..	22.10.29	9.7.30	Hon. J. H. Scullin(b) (n) ..	22.10.29	6.1.32
Rt. Hon. J. H. Scullin(n)	9.7.30	29.1.31	Hon. J. G. Latham, C.M.G., K.C.(j) ..	6.1.32	12.10.34
Hon. E. G. Theodore ..	29.1.31	0.1.32	Rt. Hon. Sir G. P. Pearce, K.C.V.O.(r) ..	12.10.34	29.11.37
Rt. Hon. J. A. Lyons (c) (n) ..	6.1.32	3.10.35	Rt. Hon. W. M. Hughes, K.C.(l) ..	20.11.37	26.4.39
Hon. R. G. Casey, D.S.O., M.C.(o) ..	3.10.35	26.4.39	Hon. Sir H. S. Gullett, K.C.M.G. ..	26.4.39	14.3.40
Rt. Hon. R. G. Menzies, K.C.(n) ..	26.4.39	14.3.40	Hon. J. McEwen ..	14.3.40	28.10.40
Hon. P. C. Spender, K.C.	14.3.40	28.10.40	Hon. Sir F. H. Stewart, Kt. ..	28.10.40	7.10.41
Hon. A. W. Fadden(c)(p)	28.10.40	7.10.41	Hon. H. V. Evatt, LL.D., D.Litt., K.C.(e) ..	7.10.41	19.12.49
Hon. J. B. Chifley(p)(q)	7.10.41	19.12.49	Hon. P. C. Spender, K.C.	19.12.49	(h)
Rt. Hon. A. W. Fadden	19.12.49	(h)			

(a) Afterwards Viscount Bruce of Melbourne, C.H., M.C. (b) P.C., 1930. (c) Afterwards the Rt. Hon. J. A. Lyons, C.H. (d) Died while holding office. (e) C.H., 1942. (f) P.C., 1942. (g) P.C., 1945. (h) Still in office. (i) Afterwards the Hon. Sir L. E. Groom, K.C.M.G., K.C. (j) Afterwards the Rt. Hon. Sir J. G. Latham, G.C.M.G., K.C. (k) P.C., 1937. (l) C.H., 1941. (m) Afterwards the Rt. Hon. Sir E. C. G. Page, G.C.M.G., C.H. (n) Prime Minister. (o) Afterwards the Rt. Hon. R. G. Casey, C.H., D.S.O., M.C. (p) Prime Minister from 29th August, 1941. (q) Prime Minister from 13th July, 1945. (r) Senator.

COMMONWEALTH MINISTERS OF STATE, 1ST APRIL, 1925 TO 31ST DECEMBER, 1949—continued.

TRADE AND CUSTOMS.

Name.	From—	To—
Hon. H. E. Pratten ..	13.6.24	7.5.28
Rt. Hon. S. M. Bruce, C.H., M.C.(a)(b) ..	8.5.28	24.11.28
Hon. H. S. Gullett(c) ..	24.11.28	22.10.29
Hon. J. E. Fenton(d) ..	22.10.29	4.2.31
Hon. F. M. Forde (e) ..	4.2.31	6.1.32
Hon. H. S. Gullett(e) ..	6.1.32	14.1.33
Hon. T. W. White, D.F.C., V.D. ..	14.1.33	8.11.38
Hon. J. A. Perkins ..	8.11.38	26.4.39
Hon. J. N. Lawson ..	26.4.39	23.2.40
Rt. Hon. R. G. Menzies, K.C.(a) ..	23.2.40	14.3.40
Hon. G. McLeay(f) ..	14.3.40	28.10.40
Hon. E. J. Harrison ..	28.10.40	7.10.41
Hon. R. V. Keane(f) ..	7.10.41	27.4.46
Hon. R. J. Dedman ..	29.4.46	18.6.46
Hon. J. M. Fraser(f) ..	18.6.46	1.11.46
Hon. B. Courtice(f) ..	1.11.46	19.12.49
Hon. N. O'Sullivan(f) ..	19.12.49	(h)

COMMERCE AND AGRICULTURE.

(Prior to 19th January, 1928 known as Markets and Migration; from 19th January, 1928 to 10th December, 1928, Markets; from 10th December, 1928 to 21st April, 1930, Markets and Transport; from 21st April, 1930 to 13th April, 1932, Markets; from 13th April, 1932 to 22nd December, 1942, Commerce.)

Name.	From—	To—
Hon. R. V. Wilson (f)(m) ..	16.1.25	18.6.26
Hon. T. Paterson ..	18.6.26	22.10.29
Hon. P. J. Moloney ..	22.10.29	6.1.32
Hon. C. A. S. Hawker ..	6.1.32	23.9.32
Rt. Hon. J. A. Lyons (a)(j) ..	3.10.32	13.10.32
Hon. F. H. Stewart(n) ..	13.10.32	9.11.34
Rt. Hon. E. C. G. Page (o)(p) ..	9.11.34	26.4.39
Hon. G. McLeay(f) ..	26.4.39	14.3.40
Hon. A. G. Cameron ..	14.3.40	28.10.40
Rt. Hon. Sir E. C. G. Page, G.C.M.G.(o) ..	28.10.40	7.10.41
Hon. W. J. Scully ..	7.10.41	1.11.46
Hon. R. T. Pollard ..	1.11.46	19.12.49
Hon. J. McEwen ..	19.12.49	(h)

INFORMATION.

(Created 12th September, 1939.)

Name.	From—	To—
Hon. Sir H. S. Gullett, K.C.M.G. ..	12.9.39	14.3.40
Rt. Hon. R. G. Menzies, K.C.(a) ..	14.3.40	13.12.40
Hon. H. S. Foll(f) ..	13.12.40	7.10.41
Hon. W. P. Ashley(f) ..	7.10.41	21.9.43
Hon. A. A. Calwell ..	21.9.43	19.12.49
Hon. O. H. Beale ..	19.12.49	(h)

POSTMASTER-GENERAL.

Name.	From—	To—
Hon. W. G. Gibson(i) ..	9.2.23	22.10.29
Hon. J. A. Lyons(j) ..	22.10.29	4.2.31
Hon. A. E. Green ..	4.2.31	6.1.32
Hon. J. E. Fenton(d) ..	6.1.32	13.10.32
Hon. R. A. Parkhill(k) ..	13.10.32	12.10.34
Hon. A. J. McLachlan (f)(l) ..	12.10.34	7.11.38
Hon. A. G. Cameron ..	7.11.38	26.4.39
Hon. E. J. Harrison ..	26.4.39	14.3.40
Hon. H. V. C. Thorby ..	14.3.40	28.10.40
Hon. G. McLeay(f) ..	28.10.40	26.6.41
Hon. T. J. Collins ..	26.6.41	7.10.41
Hon. W. P. Ashley(f) ..	7.10.41	2.2.45
Hon. D. Cameron(f) ..	2.2.45	19.12.49
Hon. H. L. Anthonny ..	19.12.49	(h)

HEALTH.

Name.	From—	To—
Hon. Sir N. R. Howse, V.C., K.C.B., K.C.M.G. ..	16.1.25	2.4.27
Rt. Hon. S. M. Bruce, C.H., M.C.(a)(b) ..	2.4.27	24.2.28
Hon. Sir N. R. Howse, V.C., K.C.B., K.C.M.G. ..	24.2.28	22.10.29
Hon. F. Anstey ..	22.10.29	3.3.31
Hon. J. McNeill ..	3.3.31	6.1.32
Hon. C. W. C. Marr, D.S.O., M.C., V.D.(g) ..	6.1.32	12.10.32
Rt. Hon. W. M. Hughes, K.C.(r) ..	12.10.32	6.11.35
Rt. Hon. J. A. Lyons, C.H.(a) ..	8.11.35	26.2.36
Rt. Hon. W. M. Hughes, K.C.(r) ..	26.2.36	29.11.37
Rt. Hon. Sir E. C. G. Page, G.C.M.G.(o) ..	29.11.37	7.11.38
Hon. H. S. Foll(f) ..	7.11.38	26.4.39
Hon. Sir F. H. Stewart, Kt. ..	26.4.39	14.3.40
Hon. H. V. C. Thorby ..	14.3.40	28.10.40
Hon. Sir F. H. Stewart, Kt. ..	28.10.40	7.10.41
Hon. E. J. Holloway(s) ..	7.10.41	21.9.43
Hon. J. M. Fraser(f) ..	21.9.43	18.6.46
Hon. N. E. McKenna(f) ..	18.6.46	19.12.49
Rt. Hon. Sir E. C. G. Page, G.C.M.G., C.H. ..	19.12.49	(h)

INTERIOR.

(Created 12th April, 1932.)

Name.	From—	To—
Hon. R. A. Parkhill(k) ..	12.4.32	13.10.32
Hon. J. A. Perkins ..	13.10.32	12.10.34
Hon. E. J. Harrison ..	12.10.34	9.11.34
Hon. T. Paterson ..	9.11.34	29.11.37
Hon. J. McEwen ..	29.11.37	26.4.39
Hon. H. S. Foll(f) ..	26.4.39	7.10.41
Hon. J. S. Collings(f) ..	7.10.41	13.7.45
Hon. H. V. Johnson ..	13.7.45	19.12.49
Hon. P. A. M. McBride ..	19.12.49	(h)

(a) Prime Minister. (b) Afterwards Viscount Bruce of Melbourne, C.H., M.C. (c) Afterwards the Hon. Sir H. S. Gullett, K.C.M.G. (d) C.M.G., 1938. (e) P.C., 1944. (f) Senator. (g) Died while holding office. (h) Still in office. (i) Senator, 1934-47. (j) Afterwards the Rt. Hon. J. A. Lyons, C.H. (k) Afterwards the Hon. Sir R. A. Parkhill, K.C.M.G. (l) Resigned, 3rd November, 1938, but continued to carry out functions of Postmaster-General until 7th November, 1938. (m) Afterwards the Hon. Sir R. V. Wilson, K.B.E. (n) Afterwards the Hon. Sir F. H. Stewart, Kt. (o) Afterwards the Rt. Hon. Sir E. C. G. Page, G.C.M.G., C.H. (p) Prime Minister from 7th April, 1939. (q) Afterwards the Hon. Sir C. W. C. Marr, K.C.V.O., D.S.O., M.C., V.D. (r) C.H., 1941. (s) Afterwards the Rt. Hon. E. J. Holloway.

COMMONWEALTH MINISTERS OF STATE, 1ST APRIL, 1925 TO 31ST DECEMBER, 1949—continued.

DEFENCE.
(From 13th November, 1939 to 14th April, 1940 known as Defence Co-ordination.)

Name.	From—	To—
Hon. Sir N. R. Howse, V.C. K.C.B., K.C.M.G., Hon. Sir T. W. Glasgow, K.C.B., C.M.G., D.S.O., V.D.(a) ..	16.1.25	2.4.27
Hon. A. E. Green ..	2.4.27	22.10.29
Hon. J. J. Daly(a) ..	22.10.29	4.2.31
Hon. J. B. Chiffley(b) ..	4.2.31	3.3.31
Rt. Hon. Sir G. F. Pearce, K.C.V.O.(a) ..	3.3.31	6.1.32
Hon. R. A. Parkhill(c) ..	6.1.32	12.10.34
Rt. Hon. J. A. Lyons, C.H.(d) ..	12.10.34	20.11.37
Hon. H. V. C. Thorby ..	20.11.37	29.11.37
Hon. G. A. Street, M.C. ..	29.11.37	7.11.38
Rt. Hon. R. G. Menzies, K.C.(e) ..	7.11.38	13.11.39
Hon. J. Curtin(f) (f) ..	13.11.39	7.10.41
Hon. J. A. Beasley(h)(i) ..	7.10.41	(g) 6.7.45
Hon. J. J. Dedman ..	6.7.45	1.11.46
Hon. E. J. Harrison ..	1.11.46	19.12.49
	19.12.49	(j)

REPATRIATION.

(Revised 22nd October, 1929.)

Name.	From—	To—
Hon. F. Anstey ..	22.10.29	3.3.31
Hon. J. McNeill ..	3.3.31	6.1.32
Hon. C. A. S. Hawker ..	6.1.32	13.4.32
Hon. C. W. C. Marr, D.S.O., M.C., V.D.(n) ..	13.4.32	12.10.34
Rt. Hon. W. M. Hughes, K.C.(l) ..	12.10.34	6.11.35
Rt. Hon. J. A. Lyons, C.H. ..	8.11.35	6.2.36
Rt. Hon. W. M. Hughes, K.C.(l) ..	6.2.36	29.11.37
Hon. H. S. Poll(a) ..	29.11.37	26.4.39
Hon. E. J. Harrison ..	26.4.39	14.3.40
Hon. G. A. Street, M.C. ..	14.3.40	(g) 13.8.40
Hon. P. A. M. McBratney (a) ..	13.8.40	26.4.39
Hon. G. McLeay(a) ..	26.4.39	26.6.41
Hon. H. B. Collett, C.M.G., D.S.O., V.D.(a) ..	26.6.41	7.10.41
Hon. G. W. Frost ..	7.10.41	1.11.46
Hon. H. G. Barnard ..	1.11.46	19.12.49
Hon. W. J. Cooper, M.B.E.(a) ..	19.12.49	(j)

SOCIAL SERVICES.

(Created 26th April, 1939.)

Name.	From—	To—
Hon. Sir F. H. Stewart, Kt. Hon. E. J. Holloway(o) ..	26.4.39	7.10.41
Hon. J. M. Fraser(a) ..	7.10.41	21.0.43
Hon. N. E. McKenna(a) ..	21.0.43	18.6.46
Hon. W. H. Spooner(a) ..	18.6.46	19.12.49
	19.12.49	(j)

(a) Senator. (b) P.C., 1945. (c) Afterwards the Hon. Sir R. A. Parkhill, K.C.M.G.
 (d) Prime Minister while holding office. (e) Prime Minister until 29th August, 1941. (f) P.C., 1942. (g) Died
 1945. (j) Still in office. (k) Afterwards the Rt. Hon. Sir G. F. Pearce, K.C.V.O. (l) C.H.,
 1941. (m) C.H., 1936. (n) Afterwards the Hon. Sir C. W. C. Marr, K.C.V.O., D.S.O., M.C., V.D.
 (o) Afterwards the Rt. Hon. E. J. Holloway.

VICE-PRESIDENT OF THE EXECUTIVE COUNCIL.

Name.	From—	To—
Hon. L. Atkinson ..	9.2.23	18.6.26
Rt. Hon. G. F. Pearce, (a) (k) ..	18.6.26	22.10.29
Hon. J. J. Daly(a) ..	22.10.29	3.3.31
Hon. J. Barnes(a) ..	3.3.31	6.1.32
Hon. A. J. McLachlan(a) ..	6.1.32	12.10.34
Rt. Hon. W. M. Hughes, K.C.(l) ..	12.10.34	6.11.35
Rt. Hon. J. A. Lyons, (d) (m) ..	8.11.35	29.11.37
Rt. Hon. W. M. Hughes, K.C.(l) ..	29.11.37	7.11.38
Hon. G. McLeay(a) ..	7.11.38	26.4.39
Hon. J. V. Fairbairn ..	26.4.39	26.1.40
Hon. P. C. Spender, K.C. ..	26.1.40	14.3.40
Hon. Sir H. S. Gullett, K.C.M.G. ..	14.3.40	(g) 13.8.40
Hon. H. B. Collett, C.M.G., D.S.O., V.D.(a) ..	14.8.40	28.10.40
Hon. G. McLeay(a) ..	28.10.40	7.10.41
Hon. R. V. Keane(a) ..	7.10.41	21.9.43
Hon. W. P. Ashley(a) ..	21.9.43	2.2.45
Hon. J. A. Beasley(h) ..	2.2.45	13.7.45
Hon. J. S. Collings(a) ..	13.7.45	1.11.46
Hon. W. J. Scully ..	1.11.46	19.12.49
Hon. Dame E. M. Lyons, G.B.E. ..	19.12.49	(j)

TRANSPORT.

(Created 21st April, 1930: amalgamated with Home Affairs and Works and Railways as Interior on 12th April, 1932; revived, 26th June, 1941.)

Name.	From—	To—
Hon. P. J. Maloney ..	21.4.30	6.1.32
Hon. R. A. Parkhill(c) ..	6.1.32	12.4.32
Hon. H. L. Anthony ..	26.6.41	7.10.41
Hon. G. Lawson ..	7.10.41	21.9.43
Hon. E. J. Ward ..	21.9.43	19.12.49
Hon. O. H. Beale ..	19.12.49	(j)

CIVIL AVIATION.

(Created 24th November, 1938.)

Name.	From—	To—
Hon. H. V. C. Thorby ..	24.11.38	26.4.39
Hon. J. V. Fairbairn ..	26.4.39	(g) 13.8.40
Hon. A. W. Fadden(j) ..	14.8.40	28.10.40
Hon. J. McEwen ..	28.10.40	7.10.41
Hon. A. S. Drakeford ..	7.10.41	19.12.49
Hon. T. W. White, D.F.C., V.D. ..	19.12.49	(j)

COMMONWEALTH MINISTERS OF STATE, 1ST APRIL, 1925 TO 31ST DECEMBER, 1949—continued.

ARMY.

(Created 13th November, 1939.)

Name.	From—	To—
Hon. G. A. Street, M.C.	13.11.39	(b)13.8.40
Hon. P. A. M. McBride(a)	13.8.40	28.10.40
Hon. P. C. Spender, K.C.	28.10.40	7.10.41
Hon. F. M. Forde(c)	7.10.41	1.11.46
Hon. C. Chambers	1.11.46	19.12.49
Hon. J. Francis	19.12.49	(d)

AIR.

(Created 13th November, 1939.)

Name.	From—	To—
Hon. J. V. Fairbairn	13.11.39	(b)13.8.40
Hon. A. W. Fadden(g)	13.8.40	28.10.40
Hon. J. McEwen	28.10.40	7.10.41
Hon. A. S. Drakeford	7.10.41	19.12.49
Hon. T. W. White, D.F.C., V.D.	19.12.49	(d)

SUPPLY AND DEVELOPMENT.

(Created 26th April, 1939; from 17th October, 1942 to 6th April, 1948, known as Supply and Shipping.)

Name.	From—	To—
Hon. R. G. Casey, D.S.O., M.C.(h)	26.4.39	26.1.40
Hon. Sir F. H. Stewart, Kt.	26.1.40	28.10.40
Hon. P. A. M. McBride(a)	28.10.40	26.6.41
Hon. G. McLeay(a)	26.6.41	7.10.41
Hon. J. A. Beasley(i)	7.10.41	2.2.45
Hon. W. P. Ashley(a)	2.2.45	6.4.48
Hon. J. I. Armstrong(a)	6.4.48	19.12.49
Rt. Hon. R. G. Casey, C.H., D.S.O., M.C.	19.12.49	(d)

LABOUR AND NATIONAL SERVICE.

(Prior to 28th October, 1940 known as Industry; created 10th December, 1923.)

Name.	From—	To—
Hon. J. G. Latham, C.M.G., K.C.(j)	10.12.28	22.10.29
Hon. J. H. Scullin(k) (l)	22.10.29	6.1.32
Hon. J. G. Latham, C.M.G., K.C.(j)	6.1.32	12.10.34
Hon. E. G. Menzies, K.C.(m)	12.10.34	20.3.39
Rt. Hon. W. M. Hughes, K.C.(n)	20.3.39	28.10.40
Hon. H. E. Holt	28.10.40	7.10.41
Hon. E. J. Ward	7.10.41	21.9.43
Hon. E. J. Holloway(o)	21.9.43	19.12.49
Hon. H. E. Holt	19.12.49	(d)

NAVY.

(Created 13th November, 1939.)

Name.	From—	To—
Hon. Sir F. H. Stewart, Kt.	13.11.39	14.3.40
Hon. A. G. Cameron	14.3.40	28.10.40
Rt. Hon. W. M. Hughes, K.C.(e)	28.10.40	7.10.41
Hon. N. J. O. Makin(f)	7.10.41	3.8.46
Hon. W. J. F. Riordan	1.11.46	19.12.49
Hon. J. Francis	19.12.49	(d)

EXTERNAL TERRITORIES.

(Created 26th June, 1941.)

Name.	From—	To—
Hon. A. M. McDonald	26.6.41	7.10.41
Hon. J. M. Fraser(a)	7.10.41	21.9.43
Hon. E. J. Ward	21.9.43	19.12.49
Hon. P. C. Spender, K.C.	19.12.49	(d)

SHIPPING AND FUEL.

(Created 6th April, 1948.)

Name.	From—	To—
Hon. W. P. Ashley(a)	6.4.48	19.12.49
Hon. G. McLeay(a)	19.12.49	(d)

IMMIGRATION.

(Created 13th July, 1945.)

Name.	From—	To—
Hon. A. A. Calwell	13.7.45	19.12.49
Hon. H. E. Holt	19.12.49	(d)

POST-WAR RECONSTRUCTION.

(Created 22nd December, 1942.)

Name.	From—	To—
Hon. J. B. Chifley(p)	22.12.42	2.2.45
Hon. J. J. Dedman	2.2.45	19.12.49
Hon. E. J. Harrison	19.12.49	(d)

(a) Senator. (b) Died while holding office. (c) Prime Minister from 6th July, 1945 to 13th July, 1945. Afterwards the Rt. Hon. F. M. Forde. (d) Still in office. (e) C.H., 1941.
 (f) Appointed Ambassador to United States of America, 3rd August, 1946 (Hon. A. S. Drakeford, acting-Minister from 3rd August, 1946 to 1st November, 1946). (g) Afterwards the Rt. Hon. A. W. Fadden.
 (h) Afterwards the Rt. Hon. R. G. Casey, C.H., D.S.O., M.C. (i) P.C., 1946. (j) Afterwards the Rt. Hon. Sir J. G. Latham, G.C.M.G., K.C. (k) Prime Minister. (l) Afterwards the Rt. Hon. J. H. Scullin. (m) Afterwards the Rt. Hon. R. G. Menzies, K.C. (n) C.H., 1941. (o) Afterwards the Rt. Hon. E. J. Holloway. (p) Afterwards the Rt. Hon. J. B. Chifley.

COMMONWEALTH MINISTERS OF STATE 1ST APRIL, 1925 TO 31ST
DECEMBER, 1949—continued.

WORKS AND HOUSING.

(Prior to 13th July, 1945 known as Works ; created 24th November, 1938 ; amalgamated with Interior, 26th April, 1939 ; re-created 2nd February, 1945.)

Name.	From—	To—
Hon. H. V. C. Thorby ..	24.11.38	26.4.39
Hon. H. P. Lazzarini ..	2.2.45	1.11.46
Hon. N. Lemmon ..	1.11.46	19.12.49
Rt. Hon. R. G. Casey, C.H., D.S.O., M.C. ..	19.12.49	(a)

HOME AFFAIRS.

(Prior to 10th December, 1928, known as Home and Territories ; amalgamated with Works and Railways and Transport as Interior on 12th April, 1932.)

Name.	From—	To—
Rt. Hon. G. F. Pearce (e) (f) ..	21.12.21	18.6.26
Hon. Sir T. W. Glasgow, K.C.B., C.M.G., D.S.O., V.D.(e) ..	18.6.26	2.4.27
Hon. C. W. C. Marr, D.S.O., M.C., V.D.(d) ..	2.4.27	24.2.28
Hon. Sir N. R. Howse, V.C., K.C.B., K.C.M.G. ..	24.2.28	29.11.28
Hon. C. L. A. Abbott ..	29.11.28	22.10.29
Hon. A. Blakeley ..	22.10.29	6.1.32
Hon. R. A. Parkhill(g) ..	6.1.32	12.4.32

WAR ORGANIZATION OF INDUSTRY.

(Created 26th June, 1941 ; became a directorate of Post-war Reconstruction on 19th February, 1945.)

Name.	From—	To—
Hon. E. S. Spooner ..	26.6.41	7.10.41
Hon. J. J. Dedman ..	7.10.41	19.2.45

(a) Still in office. (b) Senator 1934-47. (c) Afterwards the Rt. Hon. J. A. Lyons, C.H.
(d) Afterwards the Hon. Sir C. W. C. Marr, K.C.V.O., D.S.O., M.C., V.D. (e) Senator. (f) Afterwards
the Rt. Hon. Sir G. F. Pearce, K.C.V.O. (g) Afterwards the Hon. Sir R. A. Parkhill, K.C.M.G.
(h) Prime Minister. (i) Appointed Ambassador to United States of America, 3rd August, 1946
(Hon. J. J. Dedman, acting-Minister from 3rd August, 1946 to 1st November, 1946).

WORKS AND RAILWAYS.

(Amalgamated with Home Affairs and Transport as Interior on 12th April, 1932.)

Name.	From—	To—
Hon. W. C. Hill ..	8.8.24	29.11.28
Hon. W. G. Gibson(b) ..	10.12.28	22.10.29
Hon. J. A. Lyons(c) ..	22.10.29	4.2.31
Hon. A. B. Green ..	4.2.31	6.1.32
Hon. C. W. C. Marr, D.S.O., M.C., V.D.(d) ..	6.1.32	12.4.32

HOME SECURITY.

(Created 26th June, 1941 ; amalgamated with Interior on 1st February, 1946.)

Name.	From—	To—
Hon. J. P. Abbott, M.C. ..	26.6.41	7.10.41
Hon. H. P. Lazzarini ..	7.10.41	1.2.46

MUNITIONS.

(Created 11th June, 1940 ; became a division of Supply and Development on 6th April, 1948.)

Name.	From—	To—
Rt. Hon. R. G. Menzies, K.C.(h) ..	11.6.40	28.10.40
Hon. P. A. M. McBride(e) ..	28.10.40	7.10.41
Hon. N. J. O. Makin(i) ..	7.10.41	3.8.46
Hon. J. I. Armstrong(e) ..	1.11.46	6.4.48

AIRCRAFT PRODUCTION.

(Created 26th June, 1941 ; abolished 1st November, 1946.)

Name.	From—	To—
Hon. J. W. Leckie(e) ..	26.6.41	7.10.41
Hon. D. Cameron(e) ..	7.10.41	2.2.45
Hon. N. J. O. Makin(i) ..	2.2.45	3.8.46

COMMONWEALTH MINISTERS OF STATE, 1ST APRIL, 1925 TO 31ST DECEMBER, 1949—continued.

HONORARY AND WITHOUT PORTFOLIO.

Name.	From—	To—
Hon. T. W. Crawford ..	14.1.23	29.11.28
Hon. C. W. C. Marr, D.S.O., M.C., V.D.(a) ..	16.1.25	2.4.27
Hon. Sir N. R. Howse, V.C., K.C.B., K.C.M.G.	2.4.27	24.2.28
Hon. C. W. C. Marr, D.S.O., M.O., V.D.(a)	24.2.28	22.10.29
Hon. A. J. McLachlan(b)	29.8.26	22.10.29
Hon. J. E. Ogden(b) ..	29.11.28	22.10.29
Rt. Hon. S. M. Bruce, C.H., M.C.(c) ..	23.6.32	6.10.33
Hon. J. Francis ..	12.10.34	9.11.34
Hon. Sir H. S. Gullett, K.C.M.G. ..	12.10.34	11.3.37
Hon. C. W. C. Marr, D.S.O., M.C., V.D.(a)	12.10.34	31.12.34
Hon. T. C. Brennan, LL.D., K.C.(b) ..	12.10.34	29.11.37
Hon. H. V. C. Thorby ..	9.11.34	29.11.37
Hon. J. A. J. Hunter ..	9.11.34	29.11.37
Hon. J. A. Perkins ..	29.11.37	8.11.38
Hon. A. N. MacDonald(b)	29.11.37	26.4.39
Hon. V. C. Thompson ..	29.11.37	26.4.39
Hon. A. G. Cameron ..	29.11.37	7.11.38
Hon. E. J. Harrison ..	8.11.38	26.4.39
Hon. J. A. Perkins ..	26.4.39	14.3.40
Hon. P. C. Spender, K.C.(d) ..	26.4.39	14.3.40
Hon. P. A. M. McBride(b)	26.4.39	13.8.40
Hon. H. B. Collett, C.M.G., D.S.O., V.D.(b)	26.4.39	13.8.40
Hon. H. E. Holt ..	26.4.39	14.3.40
Hon. A. W. Fadden(e) ..	14.3.40	13.8.40
Hon. H. K. Nock ..	14.3.40	28.10.40
Hon. H. B. Collett, C.M.G., D.S.O., V.D.(b)	28.10.40	26.6.41
Hon. T. J. Collins ..	28.10.40	26.6.41
Hon. J. W. Leckie(b) ..	28.10.40	26.6.41
Hon. H. L. Anthony ..	28.10.40	26.6.41

ASSISTANT.

(Not included in previous column).

Name.	From—	To—
Hon. J. Barnes(b) ..	22.10.29	3.3.31
Hon. F. M. Forde(f) ..	22.10.29	3.3.31
Hon. J. A. Beasley(g) ..	22.10.29	3.3.31
Hon. E. J. Holloway(h)	3.3.31	12.6.31
Hon. C. E. Culley ..	3.3.31	24.6.31
Hon. J. B. Dooley(b) ..	3.3.31	6.1.32
Hon. J. J. Daly(b) ..	26.6.31	6.1.32
Hon. L. L. Cunningham Rt. Hon. S. M. Bruce, C.H., M.C.(c) ..	26.6.31	6.1.32
Hon. W. Massey-Greene (b) (i) ..	6.1.32	23.6.32
Hon. J. Francis ..	6.1.32	11.10.33
Hon. J. A. Perkins ..	6.1.32	12.10.34
Hon. J. A. Guy ..	6.1.32	13.10.32
Hon. R. G. Casey, D.S.O., M.C.(f) ..	13.10.32	12.10.34
Hon. Sir H. S. W. Law- son, K.C.M.G.(b) ..	25.9.33	3.10.35
	17.10.33	12.10.34

- (a) Afterwards the Hon. Sir C. W. C. Marr, K.C.V.O., D.S.O., M.C., V.D. (b) Senator.
 (c) Afterwards Viscount Bruce of Melbourne; Minister without portfolio, London, from 26th September, 1932. (d) Acting-Treasurer from 3rd November, 1939. (e) Afterwards the Rt. Hon. A. W. Fadden. (f) Afterwards the Rt. Hon. F. M. Forde. (g) Afterwards the Rt. Hon. J. A. Beasley.
 (h) Afterwards the Rt. Hon. E. J. Holloway. (i) Afterwards the Hon. Sir Walter Massey-Greene, K.C.M.G. (j) Afterwards the Rt. Hon. R. G. Casey, C.H., D.S.O., M.C.

(b) *State Ministries.* A list of the members of the Ministry in each State in June, 1949, will be found on pages 102-104.

5. *Number and Salary of Members of the Legislatures.*—The following table shows the number and annual salary of members in each of the legislative chambers in June, 1949:—

MEMBERS OF COMMONWEALTH AND STATE PARLIAMENTS, AND ANNUAL SALARIES, JUNE, 1949.

Members in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
NUMBER OF MEMBERS.								
Upper House ..	(a)36	60	34	(b)	20	30	19	199
Lower House ..	(a)75	(c)90	65	(d)62	39	50	30	411
Total ..	(a)111	150	99	62	59	80	49	610

- (a) The Representation Act 1948 provided for the increase in numbers of the Senate to 60 and of the House of Representatives to 121 (excluding 2 members for the Territories) to take effect after the 1949 general elections. (b) Abolished in 1922. (c) The Parliamentary Electorates and Elections (Amendment) Act 1949 provided for an increase in the number of members and electorates to 94. (d) The Electoral Districts Act of 1949 provided for an increase in the number of members and electorates to 75, to apply from beginning of Thirty-second Parliament (in ordinary course of events to be elected in 1950).

MEMBERS OF COMMONWEALTH AND STATE PARLIAMENTS, AND ANNUAL SALARIES, JUNE, 1949—*continued*.

Members in—	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tasmania.	Total.
ANNUAL SALARY. (£.)								
Upper House ..	(e) 1,500	(f) 300	(g) 750	(b)	(h) 900— 975	(i) 960	(j) 800— 1,050	
Lower House ..	(e) 1,500	(k) 1,375	(g) 1,050	(l) 1,050	(h) 900— 975	(i) 960	(j) 850— 1,050	

(b) Abolished in 1922. (e) Increased from £1,000 as from July, 1947. (f) As from September, 1948. (g) Increased from £350 and £650 respectively as from July, 1948. Plus £100 for urban and country electorates (i.e., excluding Metropolitan Electoral Districts). (h) According to distance of electorate from Adelaide. Increased from £600 as from September, 1948. (i) Increased as from October, 1947 from £600 plus basic wage adjustment. Plus £50 where electorate is more than 50 miles from Perth. (j) According to area of electorate and distance from the Capital. Increased from £370-£500 and £400-£500 respectively as from August, 1948. (k) Increased from £875 as from July, 1947. (l) Increased from £850 as from July, 1948.

The use of the expressions "Upper House" and "Lower House" in the statement above, though not justified constitutionally, is convenient, inasmuch as the legislative chambers are known by different names in the Commonwealth and in some of the States.

6. **Enactments of the Parliament.**—In the Commonwealth all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution. In the States laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly or House of Assembly. The Governor-General or the State Governor acts as Viceroy as regards giving the Royal Assent to or vetoing Bills passed by the Legislatures, or reserving them for the special consideration of the Sovereign. In the States the Councils and Assemblies are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is, to the extent of the inconsistency, invalid.

§ 2. Parliaments and Elections.

1. **Qualifications for Membership and for Franchise.**—The conspectus in § 4 of "General Government" in Official Year Book No. 13 contains particulars, as in 1920, relating to the legislative chambers in the Commonwealth and State Parliaments, and shows concisely the qualifications necessary for membership and for the franchise in each House. (These were, in the main, applicable in 1946, but it must be remembered that Queensland abolished the Upper House in 1922, and that since 1934 the New South Wales Legislative Council has consisted of 60 members elected as required for a twelve-year term by the members of the two Houses.) It has further to be remembered that in 1925 the Commonwealth Parliament passed an Act removing the disqualification on racial grounds from (a) natives of British India and (b) persons who have become naturalized, while in 1949 the Parliament agreed to an Act which in effect removes the disqualification from aboriginal natives of Australia—entirely, in the States of New South Wales, Victoria, South Australia and Tasmania and in the Australian Capital Territory, and to a modified extent in Queensland, Western Australia and the Northern Territory. Disqualification of persons otherwise eligible, either as members or voters, is generally on the usual grounds of being of unsound mind or attainted of treason, being

convicted of certain offences, and, as regards membership, on the grounds of holding a place of profit under the Crown, being pecuniarily interested in a Government contract except as a member of an incorporated company of more than 25 persons, or being an undischarged bankrupt.

2. **The Commonwealth Government.**—From the establishment of the Commonwealth until 1949 the Senate had consisted of 36 members, six being returned by each of the original federating States. The Constitution empowers Parliament to increase or decrease the size of the Parliament and, as the population of the Commonwealth has more than doubled since its inception, the Parliament enacted legislation in 1948 enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation. Thus the Representation Act 1948 provides that there shall be ten Senators from each State instead of six, increasing the total to 60 Senators. To effect this transition in the Senate, seven Senators were elected from each State at the elections of 1949, four of whom taking office immediately the Senate sat after the election, the remaining three commencing their term on the usual date—1st July, 1950. Two of the seven Senators elected will retire in 1953. Members of this Chamber are normally elected for the term of six years, but half the members retire at the end of every third year, although they are eligible for re-election. Accordingly, at each subsequent election of Senators, five Senators will normally be elected in each State, making 30 to be elected at each periodical election.

In accordance with the Constitution, the total number of members of the House of Representatives must be as nearly as practicable double that of the Senate. Correspondingly, in terms of the Constitution and the Representation Act 1905-38, from the date of the 1949 elections the number of members in the House of Representatives was increased from 74 to 121 (excluding the members for the internal Territories). As the States are represented in the House of Representatives on a population basis, the numbers were increased as follows:—New South Wales—from 28 to 47; Victoria—20 to 33; Queensland—10 to 18; South Australia—6 to 10; Western Australia—5 to 8; Tasmania—5, no increase; total—74 to 121. The increase in the number of members of Parliament necessitated a redistribution of seats and a redetermination of electoral boundaries. This was carried out by the Distribution Commissioners in each State, taking into account community or diversity of interest, means of communication, physical features, existing boundaries of divisions and sub-divisions, and State electoral boundaries.

Since the general elections of 1922 the Northern Territory has been represented by one member in the House of Representatives. The Australian Capital Territory Representation Act 1948 gave similar representation to the Australian Capital Territory as from the elections of 1949. The members for the Territories may join in the debates but are not entitled to vote, except on a motion for the disallowance of any ordinance of the Territory or on any amendment to such motion.

The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. In elections for Senators, the whole State constitutes the electorate. For the purposes of elections for the House of Representatives, the State is divided into single electorates corresponding in number with the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Official Year Book.

3. **Commonwealth Elections.**—There have been eighteen complete Parliaments since the inauguration of Federation. The fifth Parliament, which was opened on 9th July, 1913, was dissolved on 30th July, 1914 in somewhat unusual circumstances, when, for the first time in the history of the Commonwealth, a deadlock occurred between the Senate and the House of Representatives in the second session of the fifth Parliament, and, in accordance with Section 57 of the Constitution which provides for such an eventuality, both Houses were dissolved by the Governor-General. Until 1927 the Parliament met at Melbourne; it now meets at Canberra, the first meeting at Parliament House, Canberra, being opened by H.M. the King, then Duke of York, on 9th May,

1927. The first session of the eighteenth Parliament opened on 6th November, 1946, and the Parliament was dissolved on 31st October, 1949. The first session of the nineteenth Parliament opened on 22nd February, 1950. Particulars of Commonwealth elections from 1931 to 1946 are shown in the following table, while details of the 1949 elections, by States, appear in the Appendix to this issue :—

COMMONWEALTH ELECTIONS.

Date.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
THE SENATE.									
19.12.1931	1,827,079	1,822,875	3,649,954	1,741,163	1,727,140	3,468,303	95.30	94.75	95.02
15.9.1934	1,954,339	1,948,338	3,902,677	1,862,749	1,845,849	3,708,598	95.31	94.74	95.03
23.10.1937	2,043,212	2,036,826	4,080,038	1,963,979	1,957,358	3,921,337	96.12	96.10	96.11
21.9.1940	2,113,169	2,126,177	4,239,346	1,989,381	2,027,422	4,016,803	94.14	95.30	94.75
21.8.1943	2,164,648	2,301,989	4,466,637	2,132,254	2,169,430	4,301,684	98.50	94.24	96.31
28.9.1946	2,314,193	2,425,660	4,739,853	2,199,860	2,254,081	4,453,941	95.06	92.93	93.97

THE HOUSE OF REPRESENTATIVES.
(CONTESTED ELECTORATES.)

19.12.1931	1,724,730	1,733,343	3,458,073	1,643,604	1,642,870	3,286,474	95.30	94.78	95.04
15.9.1934	1,930,418	1,934,021	3,864,439	1,843,949	1,833,774	3,677,723	95.52	94.82	95.17
23.10.1937	1,928,786	1,919,234	3,848,020	1,854,770	1,844,499	3,699,269	96.16	96.11	96.13
21.9.1940	2,087,003	2,109,443	4,196,446	1,966,744	2,012,205	3,979,009	94.24	95.39	94.82
21.8.1943	2,134,547	2,272,960	4,407,507	2,103,636	2,141,733	4,245,369	98.55	94.23	96.32
28.9.1946	2,314,193	2,425,660	4,739,853	2,199,860	2,254,081	4,453,941	95.06	92.93	93.97

(a) Includes members of Forces not enrolled.
with those for Senate.

(b) All electorates contested, hence numbers identical

The percentage of electors who exercised the franchise at each election rose from 53.04 for the Senate and 55.69 for the House of Representatives in 1901 to 77.69 and 78.30 respectively in 1917. The next election in 1919 showed a considerable falling off, and in 1922 the decrease was still more marked, the respective percentages for that year being 57.95 and 59.36, or very little more than those for 1901. Compulsory voting was introduced prior to the election in 1925, and an exceedingly heavy vote (over 91 per cent) was cast in that year. This high percentage has been exceeded appreciably at subsequent elections, increasing in 1943 to 96.3 per cent for both Houses. In the 1946 election it dropped to 94.0 per cent.

Members of both Houses of Parliament are elected by universal adult suffrage. The system of voting for the House of Representatives is preferential, and for the Senate, since the passing of the Commonwealth Electoral Act 1948, that of proportional representation (*see par. 4 below*). Previously it also had been preferential.

For the first time two women were elected to the Commonwealth Parliament in 1943, one to the Senate and the other to the House of Representatives.

4. **Proportional Representation in Senate Elections.**—The Commonwealth Electoral Act 1948, introduced with the Representation Act 1948 to enlarge the Commonwealth Parliament (*see above*), changed the system of scrutiny and counting of votes in Senate elections from preferential to that of proportional representation. The system of recording votes (*i.e.*, by placing numbers in the squares opposite the names of candidates in order of voters' preferences) is unchanged, however.

Summarized, the new procedure is as follows. The total number of first preference votes for all candidates is divided by one more than the number of candidates to be elected, and the resulting quotient, plus one, is taken as the quota necessary for each candidate to obtain in order to become elected. When the number of first preference votes received by an elected candidate is greater than the quota, and there are still vacancies to be filled, his votes in excess of the quota (surplus votes) are transferred in the following manner to the continuing candidates in proportion to the voters' preferences.

The number of the elected candidate's surplus votes is divided by the number of his first preference votes, the resulting fraction representing the transfer value of his surplus votes. The totals of the elected candidate's ballot papers, after the latter have been arranged in parcels according to the next available preference for continuing candidates, are multiplied by the transfer value. This determines the number of the elected candidate's votes to be transferred to each continuing candidate, the method being to transfer, after random selection, the appropriate number of ballot papers which bear the next available preference for that candidate.

After the surplus votes of all candidates elected on the count of first preferences have been so transferred, any continuing candidate who has received a number of votes equal to or greater than the quota is elected.

This procedure of the transfer of surplus votes of elected candidates is continued, while there are vacancies to be filled, until the stage is reached where no continuing candidate has received the quota of votes. Then the candidate with the lowest votes is excluded, and the whole of his ballot papers are transferred to the continuing candidates according to preferences. Any continuing candidate thereby obtaining the quota is elected, and if there are still vacancies his surplus votes are transferred.

The process of exclusion and transfer of ballot-papers is repeated until remaining vacancies are filled by candidates obtaining the quota, or, in respect of the last vacancy, by obtaining a majority of votes, even if this is less than the quota.

When transferring the surplus votes of elected candidates other than those elected on the count of first preference votes, only those ballot papers which have been transferred to the elected candidates at the last preceding count are considered. Similarly, in the transfer of surplus votes of a candidate elected during the exclusion procedure, only the ballot papers transferred from the candidate last excluded are taken into account.

The exclusion of the candidate with the lowest votes and the distribution of his ballot papers operate also immediately after the count of first preference votes, where no candidate has obtained the quota.

The amending act also provides for the filling of a long casual vacancy by the continuing candidate who, next after the periodical vacancies have been filled as above, first receives a number of votes equal to or greater than the quota.

5. Commonwealth Referenda.—(i) *General.* According to Section 128 of the Constitution, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved by a majority of the States and of the electors who voted, before it can be presented for Royal Assent. So far 23 proposals have been submitted to referenda and the consent of the electors has been received in four cases only, the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928—and the fourth in respect of Social Services in 1946. Details of the various referenda and the voting thereon were given in previous issues of the Official Year Book (*see* No. 18, p. 87, No. 31, p. 67, No. 35, p. 60, No. 36, p. 61, and No. 37, pp. 64–5).

(ii) *Post-war Reconstruction and Democratic Rights Referendum, 1944.* Particulars of events leading up to, and of, the referendum on the transfer of powers from the States to the Commonwealth in August, 1944 will be found in Official Year Book No. 37 and earlier issues.

(iii) *Social Services, Organized Marketing of Primary Products and Industrial Employment Referendum, 1946.* A referendum held on 28th September, 1946, to decide whether the Commonwealth should be empowered to legislate for the provision of certain social services, the organized marketing of primary products, and with respect to terms and conditions of employment in industry, resulted in approval being granted by the electors for the first proposal only. Consequent on obtaining this approval, the Constitution Alteration (Social Services) Act 1946 was assented to on 19th December,

1946. Section 51 (Powers of the Parliament) of the Constitution is thereby altered by the insertion, after paragraph (xxiii) invalid and old-age pensions, of the following paragraph :—

“(xxiiiia) The provision of maternity allowances, widows’ pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances.”

For a summary of the events leading up to the referendum, and for details of the voting at the referendum, see Official Year Book No. 37, pp. 64-5.

(iv) *Constitution Alteration (Rents and Prices) Referendum, 1948.* On 29th May, 1948 a referendum was taken to decide whether power should be granted to the Commonwealth Government to control rents and prices (including charges). The results showed a majority in each State against the proposal. Particulars were as follows :—

CONSTITUTION ALTERATION (RENTS AND PRICES) REFERENDUM, 29th MAY, 1948.

State.	Yes.	No.	Informal.	Total.
New South Wales	723,183	1,012,639	26,269	1,762,091
Victoria	559,361	693,937	16,739	1,270,037
Queensland	187,955	422,236	7,487	617,678
South Australia	167,171	229,438	6,169	402,778
Western Australia	105,605	168,088	4,589	278,282
Tasmania	50,437	91,845	2,853	145,135
Total	1,793,712	2,618,183	64,106	4,476,001
Percentage (a)	40.66	59.34	..	..

(a) Excludes informal votes.

6. *Broadcast of Parliamentary Proceedings.*—The proceedings of both Houses of the Commonwealth Parliament are regularly broadcast at certain specified times by the national broadcasting system. For some particulars of the origin of this practice see Official Year Book No. 37, p. 65.

7. *Parliamentary Retiring Allowances Act 1948.*—For particulars see § 3 dealing with Parliamentary Superannuation Funds, pp. 91-99.

8. *The Parliament of New South Wales.*—(i) *Constitution.* The Parliament of New South Wales consists of two Chambers, the Legislative Assembly and the Legislative Council. The Assembly consists of 90 members, elected in single-seat electoral districts, who hold their seats during the existence of the Parliament to which they are elected. The duration of Parliament is limited to three years. Until 1934 the Council was a nominee Chamber, consisting of a variable number of members appointed for life without remuneration, but as from 23rd April, 1934 it was reconstituted and became a House of 60 members to serve without remuneration for a term of twelve years, with one-quarter of the members retiring every third year. As from 1st September, 1948, however, members of the Council have been paid an allowance of £300 per annum. The electorate comprises members of both Chambers, who vote as a single electoral body at simultaneous sittings of both Chambers. At the first elections in 1933, four

groups of fifteen members were elected to serve respectively twelve years, nine years, six years, and three years. Any person resident for at least three years in Australia and entitled to vote at the election of members of the Legislative Assembly is eligible for election as a member of the Council, if nominated by two electors, an elector being a member of either of the two Houses for the time being.

Legislation assented to in July, 1949 provides for an increase in the number of members and electorates to 94. Other amendments include the restriction of postal voting and prohibition on the use of electoral propaganda for the two days preceding polling day, and on polling day itself.

(ii) *Particulars of Elections.* Since the introduction of responsible government in New South Wales there have been 34 complete Parliaments, the first of which opened on 22nd May, 1856, and was dissolved on 19th December, 1857, while the thirty-fourth was dissolved on 29th March, 1947. The thirty-fifth Parliament opened on 28th May, 1947. The elections of 1920, 1922 and 1925 were contested on the principle of proportional representation, but a reversion to the system of single seats and preferential voting was made at the later appeals to the people. Particulars of voting at elections from 1932 to 1947 are given below :—

NEW SOUTH WALES LEGISLATIVE ASSEMBLY ELECTIONS.

Year.	Electors Enrolled—Whole State.			Contested Electorates.					
				Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1932	739,009	725,999	1,465,008	690,094	676,993	1,367,087	96.42	96.37	96.39
1935	769,220	759,493	1,528,713	654,383	640,369	1,294,752	96.09	95.60	95.85
1938	803,517	804,316	1,607,833	608,727	606,767	1,215,494	96.15	95.41	95.78
1941	834,752	850,029	1,684,781	698,100	727,652	1,425,752	90.99	94.03	92.52
1944 ^a	833,300	899,406	1,732,706	610,904	699,368	1,310,272	81.62	92.85	87.47
1947	903,138	949,649	1,852,787	794,908	826,622	1,621,530	95.40	93.68	94.51

(a) Service and "Section" votes omitted in percentage calculations.

The principle of one elector one vote was adopted in 1894, and that of compulsory enrolment in 1921. Compulsory voting was introduced at the 1930 election and the percentage of electors who voted in contested electorates rose from 82.54 in 1927 to over 96 in 1932, but declined to 87.47 in 1944.

The franchise was extended to women (Women's Franchise Act) in 1902, and was exercised by them for the first time in 1904.

(iii) *Legislative Assembly Members Pensions Act 1946.* For particulars see § 3 dealing with Parliamentary Superannuation Funds, pp. 91-99.

9. *The Parliament of Victoria.*—(i) *Constitution.* Both of the Victorian legislative Chambers are elective bodies, but there is a considerable difference in the number of members of each House, as well as in the qualifications necessary for members and electors. The number of members in the Upper House is 34, and in the Lower House, 65. In the Legislative Council the tenure of the seat is for six years,

but one member for each of the seventeen provinces retires every third year. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years.

(ii) *Particulars of Elections.* Since the introduction of responsible government in Victoria there have been 36 complete Parliaments, the first of which opened on 21st November, 1856, and closed on 9th August, 1859, while the thirty-sixth was dissolved on 9th October, 1947. The thirty-seventh Parliament was opened on 2nd December, 1947. Particulars of voting at elections during the years 1931 to 1947 are shown in the following table:—

VICTORIAN ELECTIONS.
LEGISLATIVE COUNCIL.

Year.	Contested Electorates.				
	Electors Enrolled—Whole State.		Electors Enrolled.	Electors who Voted.	Percentage of Electors who Voted.
1931	470,349	239,975	93,244	38.86	
1934	469,395	160,980	47,375	29.43	
1937	447,694	265,194	208,925	78.78	
1940	471,843	235,784	178,666	75.78	
1943	465,637	117,584	83,568	71.07	
1946	517,719	393,907	291,295	73.95	

LEGISLATIVE ASSEMBLY.

Year.	Electors Enrolled—Whole State.			Contested Electorates.					
				Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1932	510,809	544,492	1,055,301	335,512	351,530	687,042	94.60	93.82	94.29
1935	532,619	566,632	1,099,251	415,081	438,389	853,470	95.00	93.82	94.39
1937	550,618	585,978	1,136,596	383,597	413,923	797,430	94.22	93.72	93.96
1940	565,002	597,065	1,162,067	377,644	408,715	786,359	93.65	93.19	93.41
1943	596,595	665,035	1,261,630	392,160	491,519	883,679	81.87	91.57	87.00
1945	594,761	682,188	1,276,949	408,671	487,800	896,561	85.75	89.93	87.98
1947	645,342	700,188	1,345,530	585,026	621,789	1,206,815	94.44	92.52	93.44

Single voting is observed in elections held for either House, plurality of voting having been abolished for the Legislative Assembly in 1899 and for the Legislative Council in 1937; for the latter House, however, it is still possible for an elector to be enrolled for more than one province, and such elector may select the province for which he desires to record his vote. A preferential system of voting (*see* Official Year Book No. 6, p. 1182) was adopted for the first time in Victoria at the election held in November, 1911. Compulsory voting was first observed at the 1927 elections for the Legislative Assembly, and at the 1937 elections for the Legislative Council. The franchise was extended to women by the Adult Suffrage Act 1908, while voting at elections was made compulsory for the Legislative Assembly in 1926 and for the Legislative Council in 1935.

(iii) *Parliamentary Contributory Retirement Fund Act 1946-1948.* For particulars *see* § 3 dealing with Parliamentary Superannuation Funds, pp. 91-99.

10. **The Parliament of Queensland.**—(i) *Constitution.* As stated previously, the Legislative Council in Queensland was abolished in 1922, the date of Royal Assent to the Act being 23rd March, 1922. The Legislative Assembly is composed of 62 members, and the State is divided into that number of electoral districts. The Electoral Districts Act of 1931, assented to on 1st October, 1931, provided that from and after the end of the twenty-fifth Parliament (dissolved on 19th April, 1932) the number of members and electoral districts should be reduced from 72 to 62.

Under the Electoral Districts Act of 1949 the number of members and the number of electorates were increased from 62 to 75, the increase to become effective from the beginning of the thirty-second Parliament, which in the ordinary course of events will be elected in 1950. The Act divided the State into four zones, as follows:—Zone 1, the "Metropolitan Zone", divided into 24 electoral districts returning 24 members; Zone 2, the "South-Eastern Zone", 28 districts and members; Zone 3, the "Northern Zone," thirteen districts and members; Zone 4, the "Western Zone", ten districts and members. A commission of three appointed by the Governor-in-Council will completely distribute the prescribed zones into the number of electoral districts. District quotas will be obtained by dividing the total number of electors living in a zone and enrolled on 31st December, 1948 by the number of electoral districts prescribed for that zone. In distributing the zones the Commissioners must consider community or diversity of interest, means of communication, physical features, boundaries of Petty Sessions Districts and of areas of Local Authorities. The Act empowers the Governor-in-Council to appoint three electoral commissioners to carry out any redistribution made necessary by future changes in the number of electors.

(ii) *Particulars of Elections.* Since the establishment of responsible government in Queensland there have been 30 complete Parliaments, the last of which was dissolved on 21st March, 1947. Opinions differ regarding the opening date of the first Queensland Parliament. According to the Votes and Proceedings of the Legislative Assembly the House met for the first time on 22nd May, 1860, when the members were sworn and the Speaker elected. The Governor, however, was unable to be present on that date, but he duly attended on 29th May, 1860, and delivered the Opening Address.

At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. Of the number of electors enrolled at the 1944 elections, 87.55 per cent. went to the polls. Statistics regarding elections during the years 1932 to 1947 are shown below:—

QUEENSLAND LEGISLATIVE ASSEMBLY ELECTIONS.

Contested Electorates.

Year.	Electors Enrolled—Whole State.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1932	274,986	250,958	525,944	236,266	220,628	456,894	92.59	93.14	92.86
1935	303,018	272,270	575,288	245,331	225,427	470,758	92.55	92.89	92.71
1938	318,402	288,157	606,559	280,841	258,196	539,037	92.09	92.97	92.51
1941	331,285	303,631	634,916	269,849	259,398	529,247	88.68	92.03	90.29
1944	329,028	326,956	655,984	251,119	261,662	512,781	85.62	89.48	87.55
1947a	357,083	340,322	697,405	324,869	308,040	632,909	90.98	90.51	90.75

(a) All electorates contested.

The election of 1907 was the first State election in Queensland at which women voted, the right being conferred under the Elections Acts Amendment Act 1905. In 1942 the system of preferential voting was abolished and that of election of the candidate obtaining the highest number of votes in the electorate now operates.

(iii) *Parliamentary Contributory Superannuation Fund Act 1948.* For particulars see § 3 dealing with Parliamentary Superannuation Funds, pp. 91-99.

II. The Parliament of South Australia.—(i) *Constitution.* In this State there is a Legislative Council composed of twenty members and a House of Assembly with 30 members, both Chambers being elective. For the Legislative Council the State is divided into five districts each returning four members two of whom retire alternately. Thirty-nine districts return one member each to the House of Assembly; prior to 1938 there were 46 members representing nineteen districts.

(ii) *Particulars of Elections.* Since the inauguration of responsible government in South Australia there have been 31 complete Parliaments, the first of which was opened on 22nd April, 1857. The thirty-first Parliament was opened on 20th July, 1944, and was dissolved on 28th February, 1947. The thirty-second Parliament was opened on 26th June, 1947. The duration of the twenty-eighth Parliament was extended from three to five years by the provisions of the Constitution (Quinquennial Parliament) Act 1933, but this Act was repealed by the Constitution Act Amendment Act (No. 2) 1939, and the three-year term was reverted to. Particulars of voting at the last six elections are shown below :—

SOUTH AUSTRALIAN ELECTIONS.

Year.	Contested Electorates.								
	Electors Enrolled—Whole State.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.

LEGISLATIVE COUNCIL.

1930 ^b	(a)	(a)	133,274	(a)	(a)	100,040	(a)	(a)	75.06
1933	(a)	(a)	133,152	(a)	(a)	25,309	(a)	(a)	64.21
1938 ^b	92,109	37,026	129,135	67,691	23,474	91,165	73.49	63.40	70.60
1941	(a)	(a)	133,358	(a)	(a)	70,660	(a)	(a)	60.94
1944	(a)	(a)	142,314	(a)	(a)	81,791	(a)	(a)	83.05
1947 ^b	(a)	(a)	155,847	(a)	(a)	124,826	(a)	(a)	80.10

(a) Not available.

(b) All electorates contested.

HOUSE OF ASSEMBLY.

1930	(a)	(a)	325,244	(a)	(a)	222,819	(a)	(a)	71.36
1933	(a)	(a)	338,570	(a)	(a)	182,093	(a)	(a)	59.45
1938	(a)	(a)	304,884	(a)	(a)	223,130	(a)	(a)	63.31
1941	(a)	(a)	378,265	(a)	(a)	171,978	(a)	(a)	50.69
1944	(a)	(a)	401,747	(a)	(a)	255,883	(a)	(a)	88.53
1947	(a)	(a)	418,308	(a)	(a)	285,765	(a)	(a)	93.37

(a) Not available.

South Australia was the first of the States to grant women's suffrage (under the Constitution Amendment Act 1894), the franchise being exercised by women for the first time at the Legislative Assembly election on 25th April, 1896. Compulsory voting for the House of Assembly, provided for by the Electoral Act Amendment Act 1942, was first observed at the 1944 election. A system of preferential voting is in operation.

(iii) *Parliamentary Superannuation Act 1948.* For particulars see § 3 dealing with Parliamentary Superannuation Funds, pp. 91-99.

12. The Parliament of Western Australia.—(i) *Constitution.* In this State both Chambers are elective. For the Legislative Council there are 30 members, each of the ten provinces returning three members, one of whom retires biennially. At each biennial election the member elected holds office for a term of six years, and automatically retires at the end of that period. The Legislative Assembly is composed of 50 members, one member being returned by each electoral district. Members of the Legislative Assembly are elected for three years.

(ii) *Particulars of Elections.* Since the establishment of responsible government in Western Australia there have been eighteen complete Parliaments, the first of which was opened on 30th December, 1890. The eighteenth Parliament was opened on 27th July, 1944, and expired on 31st January, 1947. The preferential system of voting in use in Western Australia is described in Official Year Book No. 6, p. 1184. Elections for membership of both Houses, which were due to be held early in 1942, were postponed by the Legislative Council Postponement of Elections Act 1942 and the Legislative Assembly Duration and General Elections Postponement Act 1941. Particulars of voting at the last six elections for each Chamber are shown in the table following:—

WESTERN AUSTRALIAN ELECTIONS.

Year.	Electors Enrolled—Whole State.			Contested Electorates.					
				Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.

LEGISLATIVE COUNCIL.

1936	63,407	21,987	85,394	18,479	6,394	24,873	45.03	40.03	43.62
1938	62,992	23,419	86,411	19,132	6,971	26,103	52.64	45.57	50.54
1940	62,745	23,598	86,343	24,904	8,013	32,917	41.96	35.29	40.11
1944	56,021	23,868	79,889	17,564	5,453	23,017	50.88	45.46	49.48
1946	61,599	26,284	87,883	12,204	3,799	16,003	45.18	41.18	44.16
1948	60,874	25,985	86,859	20,709	7,862	28,571	43.00	35.32	40.57

LEGISLATIVE ASSEMBLY.

1930	122,576	107,500	230,076	75,206	63,807	139,013	75.44	73.30	74.44
1933	124,776	112,419	237,195	96,210	89,802	186,012	90.23	91.00	90.60
1936	130,065	117,400	247,465	71,734	64,575	136,309	71.95	68.22	70.13
1939	138,240	127,747	265,987	104,228	101,510	205,738	89.01	91.07	90.01
1943	137,100	137,756	274,856	70,766	94,537	165,303	67.96	87.33	85.53
1947	150,176	146,913	297,089	83,270	83,067	166,337	85.65	85.60	85.61

(a) Includes 18,478 members of Forces not enrolled.

(b) Includes 567 members of Forces not enrolled.

Women's suffrage was granted by the Electoral Act of 1899. The first woman member to be elected to an Australian Parliament was returned at the 1921 election in this State. Voting for the Legislative Assembly was made compulsory in December, 1936, the first elections for which the provision was in force being those held on 18th March, 1939, when the percentage of electors who voted in contested electorates rose from 70.13 to 90.01. The high percentage of 90.60 in 1933 was due to the fact that the Secession Referendum, at which voting was compulsory, was taken on the Legislative Assembly election day (for particulars of the referendum *see* Official Year Book No. 26, p. 70, and later issues).

(iii) *Parliamentary Superannuation Act 1948.* For particulars *see* § 3 dealing with Parliamentary Superannuation Funds, pp. 91-99.

13. **The Parliament of Tasmania.**—(i) *Constitution.* In Tasmania there are two legislative Chambers—the Legislative Council and the House of Assembly, both bodies being elective. In accordance with the Constitution Act 1946, the Council now consists of nineteen members, elected for six years and returned from nineteen divisions. Three members retire annually (except in the 1953 elections and in each sixth successive year thereafter, when four retire) and the Council cannot be dissolved as a whole. Prior to the 1946 Act there were eighteen members elected from fifteen divisions, of which Hobart returned three members and Launceston two. There are five House of Assembly divisions, corresponding to the Commonwealth electoral divisions, each returning six members elected under a system of proportional representation which first came into force at the 1909 elections (*see* Official Year Book No. 6, p. 1185). The life of the Assembly was extended from three to five years by the Constitution Act 1936.

(ii) *Particulars of Elections.* The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been 27 complete Parliaments since the inauguration of responsible government. Particulars of the voting at the last six elections for the House of Assembly are shown hereunder :—

TASMANIAN HOUSE OF ASSEMBLY ELECTIONS.

Year.	Contested Electorates.								
	Electors Enrolled—Whole State.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1931	59,024	59,706	118,730	56,674	56,105	112,779	96.02	93.97	94.00
1934	63,841	63,846	127,681	60,623	59,009	120,622	94.96	93.98	94.47
1937	66,223	65,778	132,001	62,880	61,580	124,460	94.95	93.62	94.29
1941	60,058	70,176	130,234	61,480	65,554	127,034	89.03	93.41	91.24
1946	78,420	79,336	157,756	71,414	72,260	143,674	91.07	91.08	91.07
1948	79,544	81,544	161,088	74,697	73,891	148,588	93.91	90.61	92.24

The present members of the Legislative Council have been elected at various dates and the following particulars relate to the contested elections in three divisions in 1947 and 1948 respectively :—Number of electors on the roll, 12,545 and 21,762 ; number of votes recorded, 10,102 and 17,800 ; percentage of enrolled electors who voted, 80.53 and 81.79.

The suffrage was granted to women under the Constitution Amendment Act 1903 and compulsory voting came into force on the passing of the Electoral Act in 1928. The system of voting is proportional representation by single transferable vote.

§ 3. Conspectus of Superannuation Funds of the Parliaments of the Commonwealth and of the Australian States as at 30th June, 1949.

The following pages contain a summary of the main features of the Parliamentary Superannuation Funds established by the Parliament of the Commonwealth of Australia and the Parliament of each of the States of New South Wales, Victoria, Queensland, South Australia and Western Australia as at 30th June, 1949. No such fund operates in respect of the Tasmanian Parliament. In Western Australia a system previously existed which provided for the payment of a lump sum on loss of membership, but the authorizing Act (Members of Parliament Fund Act 1941-1944) was repealed on the commencement of the new Act. The amounts at credit of the former fund were transferred to the new fund, and the period during which deductions were made under the repealed Act is taken into account when determining a member's period of contributions under the new Act.

In addition to the main features of the funds summarized hereafter, there are a number of matters for which the several authorizing Acts prescribed fairly uniform treatment, and which, in order to obviate extending the table unduly, may here be dealt with briefly.

Application of Benefits. Benefits apply only to persons who are Members of Parliament at the commencement of the Act, or become members thereafter.

Service. Periods during which a member or former member was entitled to Parliamentary allowance; etc.; includes broken periods and service before and after commencement of Act.

Resignation before, or retirement on, expiration of term of service as a member. In such cases, in order to be eligible for a pension, etc. (in the Commonwealth scheme to avoid classification under "voluntary" retirement), a former member must produce adequate and satisfactory reasons for his failure to continue as a member. Such reasons include ill health, defeat at an ensuing election or by-election, failure to secure the support of the recognized political party of which he is a member, etc.

Suspension or reduction of pension on again becoming a Member of Parliament, or on holding office of profit, etc., under Crown. Provision exists generally for the suspension or reduction of benefit received during period of remuneration from new office (the Victorian scheme provides for disqualification for life on acceptance of office of profit, etc., under Crown).

Repayment of refund of contributions. On re-election to his former Parliament a member who has received a refund of contributions must repay it within a prescribed time in order to have the service covered by the contributions once again credited to him.

Assignment of pensions. Pensions are absolutely inalienable.

CONSPECTUS OF SUPERANNUATION FUNDS OF THE PARLIAMENTS OF THE

Particulars.	Commonwealth.	New South Wales.
(I) <i>Authorizing Act—</i> (a) Title	Parliamentary Retiring Allowances Act 1948	Legislative Assembly Members Pensions Act 1946
(b) Date of Assent	21st December, 1948.. .. .	1st May, 1946
(c) Date of Commencement	1st December, 1948	7th May, 1946
(d) Purpose	"To make provision for Contributory Retiring Allowances for Persons who have served as Members of the Parliament"	"To provide for the establishment of a provident fund for Members of the Legislative Assembly; to confer on certain persons who have ceased to be Members of the Legislative Assembly and on certain other persons rights to receive payments by way of pension and for purposes connected therewith"
(II) <i>Number of Members of Parliament or Legislative Chamber to which Act at present relates</i>	112†	90†
(III) <i>Operating Body—</i> (a) Title	Parliamentary Retiring Allowances Trust	(No specific title for the operating body—the Trustees of the Fund—is enacted, but the Under Secretary of the Treasury is declared to be a corporation sole under the name of "The Under Secretary of the Treasury")
(b) Constitution.. .. .	Five trustees—the Treasurer, two senators and two members of the House of Representatives	Not more than seven trustees—of whom the Under Secretary of the Treasury is custodian trustee and the others managing trustees, the latter to be members of the Legislative Assembly
(c) Appointment and removal of trustees	Other than Treasurer—by House of which they are members	By order of the Legislative Assembly
(IV) <i>Fund—</i> (a) Title	Parliamentary Retiring Allowances Fund	Legislative Assembly Members' Provident Fund
(b) Composition.. .. .	(i) Contributions paid and repayments made by members and former members under the Act (ii) Moneys paid into the fund by the Commonwealth under the Act (iii) Income derived from the investment of moneys forming part of the fund	(i) Contributions paid and repayments made by members and former members under the Act (ii) All other moneys payable to the fund under the Act (iii) All income of the fund including interest from investment

* Payments into fund commenced after passing of original Act on 24th December, 1946.

† After next general elections following 30th June, 1949 to be increased as follows: Commonwealth,

COMMONWEALTH AND OF THE AUSTRALIAN STATES AS AT 30th JUNE, 1949.

Victoria.	Queensland.	South Australia.	Western Australia.
Parliamentary Contributory Retirement Fund Act 1946-1948	The Parliamentary Contributory Superannuation Fund Act of 1948	Parliamentary Superannuation Act 1948	Parliamentary Superannuation Act 1948
Original Act—24th December, 1946. Amending Act—31st August, 1948	17th December, 1948 ..	26th August, 1948 ..	21st January, 1949
1st July, 1948* "To provide for a Contributory Retirement Fund for Members of Parliament and for other purposes"	1st January, 1949 .. "To provide for a Contributory Superannuation Fund for Members of the Legislative Assembly, and for other purposes"	26th August, 1948 .. "To provide for the payment of superannuation pensions to persons who have served as Members of Parliament and for other matters incidental thereto"	1st January, 1949 "To provide for the payment of superannuation pensions or other benefits to persons who have served as Members of Parliament and to their dependants"
99	62†	59	80
(No specific title for the operating body—the Trustees of the Fund—is enacted)	The Trustees of the Parliamentary Contributory Superannuation Fund	The Trustees of the Parliamentary Superannuation Fund	The Trustees of the Parliamentary Superannuation Fund
Six trustees—the Treasurer of Victoria (chairman), the President of the Legislative Council, the Speaker of the Legislative Assembly, a member of the Legislative Council and two members of the Legislative Assembly	Three trustees— <i>ex officio</i> the three persons for the time being holding respectively the offices of Premier and Chief Secretary of Queensland (chairman), Speaker of the Legislative Assembly and the member of the Legislative Assembly recognized as Leader of the Opposition	Three trustees—the persons for the time being holding the offices of President of the Legislative Council, Speaker of the House of Assembly and Under Treasurer	Five trustees—the Treasurer <i>ex-officio</i> or his deputy (chairman) and two members each from the Legislative Council and the Legislative Assembly
Appointed trustees—by Governor-in-Council			Other than Treasurer—by order of respective Houses
Parliamentary Contributory Retirement Fund	The Parliamentary Contributory Superannuation Fund	The Parliamentary Superannuation Fund	Parliamentary Superannuation Fund
(i) All deductions made under the Act from the salaries of members (ii) Such amounts as are from time to time necessary from Consolidated Revenue (iii) Interest from investment	(i) Contributions paid by members under the Act (ii) Moneys paid into the fund by the Treasurer under the Act (iii) All interest and other income earned by investment of the fund	(i) Contributions paid by members under the Act (ii) Moneys paid into the fund by the Treasurer under the Act (iii) All interest and other income earned by the investment of the fund	(i) Contributions paid by members under the Act (ii) All interest and other income earned by the investment of the fund (iii) Moneys borrowed by the trustees under the Act (iv) All moneys to the credit of the Members of Parliament Fund at the commencement of the Act

CONSPICUOUS OF SUPERANNUATION FUNDS OF THE PARLIAMENTS OF THE
—continued.

Particulars.	Commonwealth.	New South Wales.
(iv) <i>Fund</i> —continued		
(c) Investment of Assets ..	As far as practicable, in securities of the Commonwealth or in any other manner for the time being allowed by any Act or State Act for the investment of trust funds in Australia. Uninvested moneys may be lodged at call or on fixed deposit with the Treasurer or Commonwealth Bank	As far as practicable, in securities of the Government of the Commonwealth, loans to the councils of shires or municipalities or the Municipal Council of Sydney, on mortgage of land in the State of an estate in fee-simple or on mortgage of leasehold interests in such land, or in any other manner for the time being allowed by Act of Parliament or by rules of court for the investment of trust funds. Uninvested moneys may be lodged either at call or on fixed deposit with the Colonial Treasurer or with any Bank
(d) Cost of Administration	..	To be paid out of fund
(e) Taxation of Income ..	Not subject to any rates, taxes or charges under any law of the Commonwealth or State	Not subject to taxation under any Act of the State
(f) Audit	Accounts subject to inspection and audit at least once yearly by Auditor-General. Report to be transmitted to both Houses of Parliament	Accounts to be audited by Auditor-General
(g) Actuarial Investigation	At intervals of not more than seven years by Commonwealth Actuary	..
(v) <i>Contributions to Fund by</i> —		
(a) Member (i.e., a person in receipt of parliamentary allowance, salary, etc.)	Rate £156 per year Method of deduction In instalments from every payment of parliamentary allowance made to the member or other person, each instalment to be in respect of the period for which payment is made	£78 per year Upon each payment of the salary of a member of the Legislative Assembly
(b) Government ..	(I) An amount equal to 50 per cent. of each amount paid out of the fund as pension; and (II) An amount equal to the Commonwealth supplement payable to any person (i.e., one and a half times the contributions paid or deemed paid during period of service, or, if that exceeds 8 years, the last 8 years thereof)	The amount of the debit balance of a sectional account (an account for each Parliament credited with payments to the fund and debited with amounts paid out of the fund) at 30th June in each year

† A member holding office at commencement of the Act may, before the due date of first periodical become a contributor, whereon the Act does not apply to him.

COMMONWEALTH AND OF THE AUSTRALIAN STATES AS AT 30TH JUNE, 1949

Victoria.	Queensland.	South Australia.	Western Australia.
To the extent and in the manner determined by the trustees	In debentures, stock, Treasury Bills, or other securities of the Government of Queensland or of the Commonwealth	In such investments as the trustees think proper	In any investments in which trustees are authorized to invest trust funds under the Trustee Act 1900, or any other Act
..	To be paid out of fund	To be paid out of fund	To be paid out of Consolidated Revenue
..	Not subject to any tax imposed by law of the State	Not subject to any tax imposed by any law of the State	Not subject to any tax imposed by law of the State
(Not provided for in Act, but fund is subject to audit, and details of receipts and payments are published annually in the Auditor-General's Report)	Accounts to be audited each financial year by Auditor-General and copies to be laid before Legislative Assembly	In each year accounts to be audited by Auditor-General and copies laid before both Houses of Parliament	In each year accounts to be audited by Auditor-General and copies laid before both Houses of Parliament
..	Once at least in every 5 years by an actuary approved by the trustees	(Certificate by Public Actuary required for such additional sum as is necessary each year for payment of benefits)	Every 5 years
£2 per fortnight .. Upon each periodical payment of the salary of a member	£4 per fortnight .. Upon each periodical payment of the salary of a member or person who, having ceased to be a member, is in receipt of salary	£58 10s. per year .. In equal instalments from every amount of parliamentary salary payable to the member or other person	£48 per year .. In equal instalments from every amount of parliamentary allowance payable to the member
Such amounts, as are from time to time necessary to enable payments to be made under the Act	(i) Not later than fourteen days after the end of each month, a sum equal to the contributions paid or payable during that month (ii) In respect of each financial year such additional sum as an actuary certifies from time to time to be necessary in order to make proper provision for payment out of the fund of benefits payable under the Act	(i) Not later than fourteen days after the end of each month, a sum equal to the contributions paid or payable during that month (ii) Not later than three months after the end of each financial year, such additional sum as the Public Actuary certifies to be necessary in order to make proper provision for payment out of the fund of benefits payable under the Act	Nil

payment of salary after 1st January, 1949, notify the chairman of trustees that he does not desire to

CONSPICUOUS OF SUPERANNUATION FUNDS OF THE PARLIAMENTS OF THE

—continued.

Particulars.	Commonwealth.	New South Wales.
(vi) <i>Principal Benefits from Fund—</i> To—		
(a) Former member (i.e., a person who has ceased to be a member and has ceased to be entitled to payment of parliamentary allowance, salary, etc.)	<p>(i) £8 per week during lifetime—(a) Where, not retiring voluntarily, where service not less than 8 years and aged 45 years or over (or, if less than 45 years, on attaining age of 45 years)</p> <p>(b) Where retiring voluntarily, where service not less than 12 years and aged 45 years or over</p> <p>(ii) Refund of contributions without interest, plus payment of Commonwealth supplement (i.e., one and a half times the contributions paid or deemed paid during period of service, or, if that exceeds 8 years, or, if that exceeds 8 years thereof)—Where not retiring voluntarily, where service less than 8 years</p> <p>(iii) Refund of contributions without interest—in any other case where retiring voluntarily</p> <p>NOTE.—A person who becomes entitled to a pension may, unless a male who at time of entitlement is 50 years of age, elect to accept in lieu of pension refund of contributions and payment of the Commonwealth supplement</p>	<p>(i) £6 per week during lifetime—Where service not less than 15 years</p> <p>(ii) £5 per week during lifetime—Where service less than 15 years but having been a member in any three Parliaments—and in addition, in the case of a person who resigns before, or ceases to be a member on, the expiration of his term—with adequate reasons for his failure to continue</p> <p>(iii) Refund of contributions without interest—Where not entitled to a pension as above</p>
(b) Widow of member, or of former member in receipt of a pension provided marriage occurred before becoming a pensioner	<p>£5 per week until death or remarriage, or—Sum of husband's contributions (without interest) and Commonwealth supplement (i.e. one and a half times the contributions paid or deemed paid during period of service, or, if that exceeds 8 years, the last 8 years thereof) less any amount of pension received by, or accrued to, husband¶</p>	<p>(i) £3 per week until death or remarriage—Where husband entitled to, or in receipt of, a pension</p> <p>(ii) Refund of husband's contributions without interest—Where not entitled to a pension as above</p>

§ Retiring voluntarily—Where a person resigns before, or ceases to be a member on, expiration of certain sections of the Constitution.

¶ The basic wage from time to time for Melbourne, as derived from the quarterly statement of

¶ Provision also exists for the reduction of pension in certain cases.

COMMONWEALTH AND OF THE AUSTRALIAN STATES AS AT 30TH JUNE, 1949

Victoria.	Queensland.	South Australia.	Western Australia.
<p>(i) Pension fortnightly at rate of Melbourne basic wage during lifetime—(a) Where service not less than 15 years. (b) Where service less than 15 years, but having been a member in at least three consecutive Parliaments—and, in addition, in the case of a person who resigns before, or ceases to be a member on, the expiration of his term—with adequate reasons for his failure to continue</p> <p>(ii) Retiring allowance of £650—Where not possessed of service qualifications as above, but otherwise eligible, and having been a member in at least two consecutive Parliaments</p> <p>(iii) Retiring allowance of £325—Where not possessed of service qualifications as above, but otherwise eligible, but not having been a member in at least two consecutive Parliaments</p> <p>(i) Two-thirds of pension husband was receiving or eligible to receive, until death or remarriage</p> <p>(ii) An amount of £650 or—Aggregate of deductions under the Act, whichever is the greater—Where not eligible for a pension as above</p>	<p>(i) £7 per week during lifetime—Where service not less than 15 years</p> <p>(ii) £6 per week during lifetime—Where service not less than 12 years but less than 15 years</p> <p>(iii) £5 per week during lifetime—Where service not less than 9 years but less than 12 years</p> <p>In each case having fulfilled the following additional requirements—</p> <p>(a) Payment of contributions amounting to not less than £200 (where otherwise qualified the amount deficient may be made up within a specified time)</p> <p>(b) Attainment of age of 60 years (or attainment of age of 50 years in the case of a person who, on resigning before, or ceasing to be a member on, the expiration of his term, fails for adequate reasons to continue)</p> <p>(iv) Refund of contributions without interest—Where not entitled to an annuity as above</p> <p>(i) Two-thirds of annuity husband was receiving, or eligible to receive, until death or remarriage</p> <p>(ii) Refund of husband's contributions without interest—Where husband was, on death, still a member, but with service less than 9 years</p>	<p>(i) £250 per year during lifetime—Where service not less than 12 years—plus £20 per year increase for each complete year of service in excess of 12 up to £370 per year maximum</p> <p>In each case having fulfilled the following additional requirements—</p> <p>(a) Payment of contributions amounting to not less than £351 (where otherwise qualified, the amount deficient may be made up)</p> <p>(b) Attainment of age of 50 years</p> <p>(c) In the case of a person who resigns before, or ceases to be a member on, the expiration of his term—adequate reasons for his failure to continue</p> <p>(ii) Refund of contributions without interest—Where not entitled to a pension as above</p> <p>(i) Three-fifths of pension husband was receiving, or eligible to receive, until death or remarriage</p> <p>(ii) Refund of husband's contributions without interest—Where husband was, on death, still a member, but with service less than 12 years</p>	<p>(i) £6 per week for 10 years; £3 per week for a further 10 years—Where service not less than 14 years and having paid contributions for not less than 14 years</p> <p>(ii) £5 per week for 10 years; £2 10s. per week for a further 10 years—Where service not less than 14 years but having paid contributions for less than 14 years</p> <p>(iii) £3 per week for 10 years—Where service not less than 7 years and having paid contributions for not less than 7 years</p> <p>(iv) £2 10s. per week for 10 years—Where service not less than 7 years but having paid contributions for less than 7 years</p> <p>(v) Refund of contributions with interest at rate determined by trustees—Where service less than 7 years</p> <p>NOTE.—In the case of a person who resigns before, or ceases to be a member on, the expiration of his term, adequate reasons for his failure to continue must be produced in addition to the other qualifications necessary for benefits, etc.</p> <p>(i) Two-thirds of pension husband was entitled to receive for first 5 years of pension period; one half for remainder—Where husband was, on death, still a member</p> <p>(ii) One-half of pension husband would have been, but for death, from time to time entitled to—Where husband was, on death, a former member within the period of entitlement to pension payments</p>

his term without adequate reasons (see above), or if his place becomes vacant through an infringement

"Court Series" retail price index-numbers, including loading.

CONSPECTUS OF SUPERANNUATION FUNDS OF THE PARLIAMENTS OF THE
—continued.

Particulars.	Commonwealth.	New South Wales.
(vi) <i>Principal Benefits from Fund—</i> continued		
To—		
(c) Other dependants or personal representatives of a member, or of a former member in receipt of a pension	(i) To personal representatives, where deceased was a male not survived by a widow, or was a female other than as follows in (ii) —Refund of contributions of deceased without interest, less any amount of pension received by, or accrued due to, deceased (ii) To widower, where deceased was a female survived by a totally dependent widower and provided marriage had occurred before deceased became entitled to a pension— Pension not in excess of £5 per week, rate and period at discretion of trust	

COMMONWEALTH AND OF THE AUSTRALIAN STATES AS AT 30TH JUNE, 1949

Victoria.	Queensland.	South Australia.	Western Australia.
To legal personal representative, where deceased was a male not survived by a widow—An amount of £650 or—Aggregate of deductions under the Act, whichever is the greater	To personal representatives, where deceased was a male and on death was still a member, but with service less than 9 years, and was not survived by a widow—Refund of contributions of deceased without interest	..	To widower, where marriage had taken place prior to loss of membership or, if no surviving widow or widower, then to a dependent child or children under the age of 16 years, being the issue of such a marriage—Pension at the rate appropriate to the entitlements as above

§ 4. Administration and Legislation.

1. **The Commonwealth Parliaments.**—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by his Excellency the late Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9th May, 1901, by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King. The Rt. Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since Federation :—

COMMONWEALTH PARLIAMENTS.

Number of Parliament.	Date of Opening.	Date of Dissolution.
First	9th May, 1901	23rd November, 1903
Second	2nd March, 1904	5th November, 1906
Third	20th February, 1907	19th February, 1910
Fourth	1st July, 1910	23rd April, 1913
Fifth	9th July, 1913	30th July, 1914(a)
Sixth	8th October, 1914	26th March, 1917
Seventh	14th June, 1917	3rd November, 1919
Eighth	26th February, 1920	6th November, 1922
Ninth	28th February, 1923	3rd October, 1925
Tenth	13th January, 1926	9th October, 1928
Eleventh	9th February, 1929	16th September, 1929
Twelfth	20th November, 1929	27th November, 1931
Thirteenth	17th February, 1932	7th August, 1934
Fourteenth	23rd October, 1934	21st September, 1937
Fifteenth	30th November, 1937	27th August, 1940
Sixteenth	20th November, 1940	7th July, 1943
Seventeenth	23rd September, 1943	16th August, 1946
Eighteenth	6th November, 1946	31st October, 1949
Nineteenth	22nd February, 1950 .. .. .	.. .. .

(a) On this occasion, the Governor-General, acting on the advice of the Ministry, and under Section 57 of the Constitution, granted a dissolution of both the Senate and the House of Representatives, this being the only occasion on which a dissolution of both Houses has occurred.

2. **Governors-General and Commonwealth Ministries.**—The following statements show the names of the several Governors-General and the Ministries which have directed the administration of the affairs of the Commonwealth since its inception :—

(a) GOVERNORS-GENERAL.

Rt. Hon. EARL OF HOPETOUN (afterwards MARQUIS OF LINLITHGOW), K.T., G.C.M.G., G.C.V.O. From 1st January, 1901 to 9th January, 1903.

Rt. Hon. HALLAM, BARON TENNYSON, G.C.M.G. From 17th July, 1902 to 9th January, 1903 (Acting).

Rt. Hon. HALLAM, BARON TENNYSON, G.C.M.G. From 9th January, 1903 to 21st January, 1904.

Rt. Hon. HENRY STAFFORD, BARON NORTHCOTE, G.C.M.G., G.C.I.E., C.B. From 21st January, 1904 to 9th September, 1908.

Rt. Hon. WILLIAM HUMBLE, EARL OF DUDLEY, G.C.B., G.C.M.G., G.C.V.O. From 9th September, 1908 to 31st July, 1911.

Rt. Hon. THOMAS, BARON DENMAN, G.C.M.G., K.C.V.O. From 31st July, 1911 to 18th May, 1914.

Rt. Hon. SIR RONALD CRAUFORD MUNRO FERGUSON (afterwards VISCOUNT NOVAR OF RAITH), G.C.M.G. From 18th May, 1914 to 6th October, 1920.

Rt. Hon. HENRY WILLIAM, BARON FORSTER OF LEPE, G.C.M.G. From 6th October, 1920 to 8th October, 1925.

Rt. Hon. JOHN LAWRENCE, BARON STONEHAVEN, G.C.M.G., D.S.O. From 8th October, 1925 to 22nd January, 1931.

Lieut.-Colonel the Rt. Hon. ARTHUR HERBERT TENNYSON, BARON SOMERS, K.C.M.G., D.S.O., M.C. From 3rd October, 1930 to 22nd January, 1931 (Acting).

Rt. Hon. SIR ISAAC ALFRED ISAACS, G.C.B., G.C.M.G. From 22nd January, 1931 to 23rd January, 1936.

General the Rt. Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE, V.C., G.C.M.G., C.B., D.S.O. From 23rd January, 1936 to 30th January, 1945.

Major-General Sir WINSTON JOSEPH DUGAN, G.C.M.G., C.B., D.S.O. From 5th September, 1944 to 30th January, 1945 (Acting).

His Royal Highness PRINCE HENRY WILLIAM FREDERICK ALBERT, DUKE OF GLOUCESTER, EARL OF ULSTER AND BARON CULLODEN, K.G., K.T., K.P., P.C., G.M.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp. From 30th January, 1945 to 11th March, 1947.

Major-General Sir WINSTON JOSEPH DUGAN, G.C.M.G., C.B., D.S.O. From 18th January, 1947 to 11th March, 1947 (Acting).

Rt. Hon. WILLIAM JOHN MCKELL, K.C. From 11th March, 1947.

(b) MINISTRIES.

- (i) BARTON MINISTRY, 1st January, 1901 to 24th September, 1903.
- (ii) DEAKIN MINISTRY, 24th September, 1903 to 27th April, 1904.
- (iii) WATSON MINISTRY, 27th April, 1904 to 17th August, 1904.
- (iv) REID-McLEAN MINISTRY, 18th August, 1904 to 5th July, 1905.
- (v) DEAKIN MINISTRY, 5th July, 1905 to 13th November, 1908.
- (vi) FISHER MINISTRY, 13th November, 1908 to 1st June, 1909.
- (vii) DEAKIN MINISTRY, 2nd June, 1909 to 29th April, 1910.
- (viii) FISHER MINISTRY, 29th April, 1910 to 24th June, 1913.
- (ix) COOK MINISTRY, 24th June, 1913 to 17th September, 1914.
- (x) FISHER MINISTRY, 17th September, 1914 to 27th October, 1915.
- (xi) HUGHES MINISTRY, 27th October, 1915 to 14th November, 1916.
- (xii) HUGHES MINISTRY, 14th November, 1916 to 17th February, 1917.
- (xiii) HUGHES MINISTRY, 17th February, 1917 to 10th January, 1918.
- (xiv) HUGHES MINISTRY, 10th January, 1918 to 9th February, 1923.
- (xv) BRUCE-PAGE MINISTRY, 9th February, 1923 to 22nd October, 1929.
- (xvi) SCULLIN MINISTRY, 22nd October, 1929 to 6th January, 1932.
- (xvii) LYONS MINISTRY, 6th January, 1932 to 7th November, 1938.
- (xviii) LYONS MINISTRY, 7th November, 1938 to 7th April, 1939.
- (xix) PAGE MINISTRY, 7th April, 1939 to 26th April, 1939.
- (xx) MENZIES MINISTRY, 26th April, 1939 to 14th March, 1940.
- (xxi) MENZIES MINISTRY, 14th March, 1940 to 29th August, 1941.
- (xxii) FADDEN MINISTRY, 29th August, 1941 to 7th October, 1941.
- (xxiii) CURTIN MINISTRY, 7th October, 1941 to 21st September, 1943.
- (xxiv) CURTIN MINISTRY, 21st September, 1943 to 6th July, 1945.
- (xxv) FORDE MINISTRY, 6th July, 1945 to 13th July, 1945.
- (xxvi) CHIFLEY MINISTRY, 13th July, 1945 to 1st November, 1946.
- (xxvii) CHIFLEY MINISTRY, 1st November, 1946 to 19th December, 1949.
- (xxviii) MENZIES MINISTRY, 19th December, 1949.

(c) MENZIES GOVERNMENT (sworn in 19th December, 1949), as at 31st December, 1949.

(The State from which each Minister was elected to Parliament is added in brackets.)

MINISTERS.

<i>Prime Minister</i>	<i>The Rt. Hon. R. G. Menzies,</i> <i>K.C., (Vic.).</i>
<i>Treasurer</i>	<i>The Rt. Hon. A. W. Fadden (Qld.).</i>
<i>Minister for Defence and Minister for Post- War Reconstruction</i>	<i>The Hon. Eric J. Harrison</i> <i>(N.S.W.).</i>
<i>Minister for Labour and National Service and Minister for Immigration</i>	<i>The Hon. H. E. Holt (Vic.).</i>
<i>Minister for Commerce and Agriculture</i>	<i>The Hon. J. McEwen (Vic.).</i>
<i>Minister for External Affairs and Minister for External Territories</i>	<i>The Hon. P. C. Spender, K.C.</i> <i>(N.S.W.).</i>
<i>Minister for Supply and Development and Minister for Works and Housing</i>	<i>The Rt. Hon. R. G. Casey, C.H.,</i> <i>D.S.O., M.C. (Vic.).</i>
<i>Minister for the Interior</i>	<i>The Hon. P. A. M. McBride (S.A.).</i>
<i>Minister for Health</i>	<i>The Rt. Hon. Sir Earle Page,</i> <i>G.C.M.G., C.H. (N.S.W.).</i>
<i>Minister for Trade and Customs</i>	<i>Senator the Hon. N. O'Sullivan</i> <i>(Qld.).</i>
<i>Minister for Shipping and Fuel</i>	<i>The Hon. G. McLeay (S.A.).</i>
<i>Minister for Air and Minister for Civil Aviation</i>	<i>The Hon. T. W. White, D.F.C.,</i> <i>V.D. (Vic.).</i>
<i>Postmaster-General</i>	<i>The Hon. H. L. Anthony (N.S.W.).</i>
<i>Minister for the Army and Minister for the Navy</i>	<i>The Hon. J. Francis (Qld.).</i>
<i>Attorney-General</i>	<i>The Hon. J. A. Spicer, K.C. (Vic.).</i>

(c) MENZIES GOVERNMENT—continued.

MINISTERS.

<i>Vice-President of the Executive Council</i> ..	<i>The Hon. Dame Enid Lyons,</i> G.B.E. (Tas.).
<i>Minister for Social Services</i> ..	<i>The Hon. W. H. Spooner (N.S.W.).</i>
<i>Minister for Repatriation</i> ..	<i>Senator the Hon. W. J. Cooper,</i> M.B.E. (Qld.).
<i>Minister for Information and Minister for Transport</i>	<i>The Hon. O. H. Beale (N.S.W.).</i>

3. **State Ministers.**—The names of the members of the Ministries in each State in June, 1949 are shown in the following statement. The date on which each Ministry was sworn in is stated in parentheses :—

STATE MINISTERS, 1949.

NEW SOUTH WALES (19th May, 1947).

<i>Premier and Colonial Treasurer—</i> THE HON. J. MCGIRR.	<i>Minister for Health—</i> THE HON. C. A. KELLY.
<i>Deputy Premier, Colonial Secretary, Secretary for Mines and Minister for National Emergency Services—</i> THE HON. J. M. BADDELEY.	<i>Minister for Transport—</i> THE HON. M. O'SULLIVAN.
<i>Minister for Housing and Assistant Treasurer—</i> THE HON. C. R. EVATT, K.C.	<i>Minister for Building Materials—</i> THE HON. W. E. DICKSON, M.L.C.
<i>Minister for Education—</i> THE HON. R. J. HEFFRON.	<i>Minister for Agriculture—</i> THE HON. E. H. GRAHAM.
<i>Attorney-General—</i> THE HON. C. E. MARTIN.	<i>Minister for Conservation—</i> THE HON. G. WEIR.
<i>Minister of Justice and Vice-President of the Executive Council—</i> THE HON. R. R. DOWNING, M.L.C.	<i>Minister for Labour and Industry and Minister for Social Welfare—</i> THE HON. F. J. FINNAN.
<i>Secretary for Public Works and Minister for Local Government—</i> THE HON. J. J. CAHILL.	<i>Secretary for Lands—</i> THE HON. W. F. SHEAHAN.
	<i>Minister in Charge of Tourist Activities and Immigration—</i> THE HON. C. H. MATTHEWS.

VICTORIA (7th December, 1948).

<i>Premier and Treasurer—</i> THE HON. T. T. HOLLWAY.	<i>Minister in Charge of Housing, Minister in Charge of Materials, and Minister in Charge of State Development—</i> THE HON. A. G. WARNER, M.L.C.
<i>Minister of Transport, Minister in Charge of Electrical Undertakings, and a Vice-President of the Board of Land and Works—</i> COLONEL THE HON. W. S. KENT HUGHES, M.V.O., O.B.E., M.C., E.D.	<i>Chief Secretary—</i> LIEUT.-COLONEL THE HON. W. W. LEGGATT, D.S.O., M.C., E.D.
<i>Attorney-General and Solicitor-General—</i> THE HON. T. D. OLDHAM.	<i>Minister of Public Instruction—</i> BRIGADIER R. W. TOVELL, C.B.E., D.S.O., E.D.
<i>Minister of Agriculture, Minister of Forests, and a Vice-President of the Board of Land and Works—</i> LIEUT.-COLONEL THE HON. A. H. DENNETT.	<i>President of the Board of Land and Works, Commissioner of Crown Lands and Survey, and Minister of Soldier Settlement—</i> THE HON. R. C. GUTHRIE.
<i>Commissioner of Public Works and a Vice-President of the Board of Land and Works—</i> THE HON. J. A. KENNEDY, M.L.C.	<i>Minister of Water Supply and Minister of Mines—</i> THE HON. H. E. BOLTE.
	<i>Minister of Health—</i> THE HON. C. P. GARTSIDE, M.L.C.
	<i>Minister of Labour—</i> THE HON. A. E. McDONALD, M.L.C.

STATE MINISTERS—*continued.*

QUEENSLAND (15th May, 1947).

<i>Premier and Chief Secretary; and Vice-President of the Executive Council—</i>	<i>Treasurer—</i>
THE HON. E. M. HANLON.	THE HON. J. LARCOMBE.
<i>Secretary for Labour and Industry—</i>	<i>Secretary for Public Instruction—</i>
THE HON. V. C. GAIR.	THE HON. H. A. BRUCE.
<i>Secretary for Agriculture and Stock—</i>	<i>Minister for Transport—</i>
THE HON. H. H. COLLINS.	THE HON. J. E. DUGGAN.
<i>Secretary for Public Lands and Irrigation—</i>	<i>Secretary for Public Works, Housing and Local Government—</i>
THE HON. T. A. FOLEY.	THE HON. W. POWER.
<i>Secretary for Health and Home Affairs—</i>	<i>Secretary for Mines and Immigration—</i>
THE HON. A. JONES.	THE HON. W. M. MOORE.
	<i>Attorney-General—</i>
	THE HON. G. H. DEVRIES.

SOUTH AUSTRALIA (15th May, 1944).

<i>Premier, Treasurer, Minister of Immigration and Minister of Industry and Employment—</i>	<i>Minister of Lands, Minister of Repatriation, and Minister of Irrigation—</i>
THE HON. T. PLAYFORD.	THE HON. C. S. HINCKS.
<i>Chief Secretary, Minister of Health, and Minister of Mines—</i>	<i>Minister of Works, Minister of Railways, Minister of Marine, and Minister of Local Government—</i>
THE HON. A. L. McEWIN, M.L.C.	THE HON. M. McINTOSH.
<i>Attorney-General and Minister of Education—</i>	<i>Minister of Agriculture and Minister of Forests—</i>
THE HON. R. J. RUDALL, M.L.C.	THE HON. SIR GEORGE JENKINS, K.B.E.

WESTERN AUSTRALIA (1st April, 1947).

<i>Premier, Treasurer and Minister for the North-West—</i>	<i>Minister for Works and Water Supply—</i>
THE HON. D. R. McLARTY, M.M.	THE HON. V. DONEY.
<i>Deputy Premier, Minister for Education, Local Government and Industrial Development—</i>	<i>Attorney-General and Minister for Health and Fisheries—</i>
THE HON. A. F. WATTS, G.M.C.	THE HON. A. V. R. ABBOTT.
<i>Minister for Housing, Forests and Native Affairs—</i>	<i>Minister for Railways and Transport—</i>
THE HON. R. R. McDONALD, K.C.	THE HON. H. S. SEWARD.
<i>Minister for Lands and Labour—</i>	<i>Honorary Minister for Supply and Shipping—</i>
THE HON. L. THORN.	THE HON. ANNIE F. G. CARDELL-OLIVER.
<i>Chief Secretary and Minister for Mines and Police—</i>	<i>Honorary Minister for Agriculture—</i>
THE HON. H. S. W. PARKER, D.S.O., V.D., M.L.C.	THE HON. G. B. WOOD, M.L.C.

STATE MINISTERS—*continued.*

TASMANIA (25th February, 1948).

<i>Premier, Minister for Education and Minister administering Hydro-Electric Commission Act—</i>	<i>Chief Secretary—</i>
THE HON. R. COSGROVE.	THE HON. A. J. WHITE.
<i>Attorney-General—</i>	<i>Honorary Ministers—</i>
THE HON. R. F. FAGAN.	THE HON. E. R. A. HOWROYD
<i>Treasurer and Minister for Transport—</i>	(Minister for Forests and Minister controlling the Tourist and Immigration Department).
THE HON. J. L. MADDEN.	
<i>Minister for Agriculture and Agricultural Bank—</i>	THE HON. R. J. D. TURNBULL
THE HON. J. J. DWYER, V.C.	(Minister for Health).
<i>Minister for Lands and Works and Minister for Mines—</i>	THE HON. C. B. AYLETT
THE HON. E. E. REECE.	(Minister for Housing).

4. *The Course of Legislation.*—The actual legislation by the Commonwealth Parliament up to the end of 1948 is indicated in alphabetical order in Vol. XLVI. "The Acts of the Parliament of the Commonwealth of Australia passed during the year 1948, in the First Session of the Eighteenth Parliament of the Commonwealth and portion of the Second Session of the Eighteenth Parliament of the Commonwealth, with Tables, Appendix and Index." A "Chronological Table of Acts passed from 1901 to 1948, showing how they are affected by subsequent legislation or lapse of time" is also given, and, further, "A Table of Commonwealth Legislation passed from 1901 to 1948 in relation to the several provisions of the Constitution", is furnished. Reference should be made to these for complete information. In issues of the Official Year Book prior to No. 23, an analytic table was included showing the nature of Commonwealth legislation in force at the end of the latest year available. A classification of legislation, according to its relation to the several provisions of the Constitution, up to the end of the year 1928 will be found in No. 22, pp. 76-84.

5. *Legislation during 1948.*—The following paragraphs present a summary of some of the more important legislative enactments (excluding ordinary appropriation and loan acts) of the Commonwealth and State Parliaments during the year 1948.

Commonwealth.—Australian Broadcasting. An amending Act constituting the Australian Broadcasting Control Board and altering the method of financing the Australian Broadcasting Commission.

Australian Capital Territory Representation. Provides for the representation of the Australian Capital Territory in the Parliament of the Commonwealth.

Commonwealth Electoral. Amends the law with regard to scrutiny of votes in Senate elections.

International Trade Organization. Approves acceptance by Australia of the General Agreement on Tariffs and Trade and the Havana Charter for an International Trade Organization.

International Wheat Agreement. Approves acceptance by Australia of the International Wheat Agreement.

Nationality and Citizenship. Amends the law with regard to British nationality and provides for Australian citizenship.

Representation. An amending Act increasing the number of Senators and members of the House of Representatives.

River Murray Waters. Ratifies and approves an agreement for the further variation of the Agreement between the Commonwealth and the States of New South Wales, Victoria and South Australia, providing for the increase of storage in the Hume Dam and for the increase of the capacity of the inlet works of Lake Victoria, for the creation of a reserve of water, and for protection of the catchment areas from erosion.

Tuberculosis. Provides for medical services and financial assistance by the Commonwealth in treatment and control of tuberculosis.

Weights and Measures (National Standards). Provides for the prescription of Commonwealth legal units of measurement, to be the sole legal units of measurement.

Wheat Industry Stabilization. Repeals the Wheat Industry Stabilization Act 1946 and portions of the Wheat Industry Stabilization Act (No. 2) 1946; provides for the acquisition and marketing of wheat for a period of five years.

New South Wales.—Constitution Amendment (Legislative Council Members' Allowances). Provides for payment of an allowance of £300 per annum to members of the Legislative Council.

Fauna Protection. Repeals Birds and Animals Protection Act and provides for preservation and protection of fauna.

Industrial Arbitration. An amending Act providing for appointment of special commissioners, increasing the powers of conciliation commissioners and enabling the Industrial Commission to divide and sit as two full benches.

Landlord and Tenant. Repeals the Fair Rents Act 1939, provides for control of rents of certain premises, and for recovery of possession of certain premises; relates to matters previously dealt with under Commonwealth regulations.

Land Sales Control. Makes provision for regulating and controlling prices payable in respect of certain transactions in land; relates to matters previously dealt with under Commonwealth regulations.

Local Government (Areas). Repeals the Sydney Corporation Act; unites the City of Sydney and certain areas, constituting the united area as a city; unites certain other areas or areas and parts of areas, constituting them as municipalities; and reconstitutes the Sydney County Council.

Prices Regulation. Provides for the regulation of prices and rates for certain goods and services; relates to matters previously dealt with under Commonwealth regulations.

Racing. An amending Act providing for betting at night trotting meetings, for the constitution of a Greyhound Racing Control Board, and for matters connected with the control of racing.

Rivers and Foreshores Improvement. Provides for constitution of a Rivers and Foreshores Improvement Board, and for works to improve rivers and foreshores and to prevent erosion of land by tidal and non-tidal waters.

State Coal Mines. An amending Act providing for reconstitution of the State Coal Mines Control Board as the State Mines Control Authority with increased powers, and for appointment of a Director of State Coal Mines, and requiring State authorities to use coal from State mines.

Stock (Artificial Insemination). Provides for the control and regulation of the artificial insemination of stock.

Wheat Industry Stabilization. Complementary to Commonwealth Act of same title.

Victoria.—Cancer Institute. Establishes a Cancer Institute for research into, and treatment of, cancer and allied conditions.

Essential Services. Protects the community against the interruption or dislocation of essential services.

Hospitals and Charities. Establishes a Hospitals and Charities Commission and amends and consolidates the law relating to hospitals and charities.

Landlord and Tenant. Amending Acts, relating to the control of rents of premises and the recovery of possession of premises; relates to matters previously dealt with under Commonwealth regulations.

Parliamentary Salaries and Allowances. An amending Act increasing Parliamentary salaries and allowances.

Prices Regulation. Relates to the regulation and removal of control of prices and rates for certain goods and services and of certain transactions in land; refers to matters previously dealt with under Commonwealth regulations.

Railways Standardization Agreement. Authorizes and ratifies the execution by or on behalf of the State of Victoria of an agreement between the Commonwealth and the State of New South Wales, Victoria and South Australia in relation to the standardization of certain railways.

State Electricity Commission. An amending Act extending the borrowing powers of the State Electricity Commission of Victoria to finance its projects at Morwell and Kiewa.

Statute Law Revision Committee. Amends the Constitution Act to provide for the constitution of a Joint Statute Law Revision Committee of the Legislative Council and the Legislative Assembly.

Wheat Industry Stabilization. Complementary to Commonwealth Act of same title.

Queensland.—Coal Industry (Control). An Act to provide means for securing and maintaining adequate supplies of coal throughout Queensland and for export, and for providing for the regulation and improvement of the coal industry in Queensland; constitutes the Queensland Coal Board.

Constitution Acts Amendment. Provides for increases in salaries for Members of Parliament, Ministers, etc., and for an increase of one in Cabinet numbers.

Criminal Law. Amends the criminal code, providing for stricter control of reckless or dangerous driving.

Diseases in Stock. Amends the Stock Acts, providing for the tuberculosis testing of all dairying herds.

Industrial Law. An amending Act to make further provision for upholding the industrial law, prohibiting the counselling, etc. towards industrial offence. (Repealed by a subsequent Act.)

Land. Amends Land Acts to give power to limit perpetual lease allotments purchasable by one buyer, and to control overstocking; includes reclamation as improvement.

Landlord and Tenant. Acts relate to the determination of fair rents of dwelling-houses and recovery of possession of premises; Fair Rents Acts are repealed; refer to matters previously dealt with under Commonwealth Regulations.

Profiteering Prevention. Relates to the regulation of prices and rates of certain goods and services and of the sales of certain lands; consolidates and amends the law relating to the prevention of profiteering; refers to matters previously dealt with under Commonwealth regulations.

Queensland.—British Food Production. Provides for the development and extension of primary industries by establishing the Queensland—British Food Corporation.

State Electricity Commission. An amending Act reconstituting the corporation of the State Electricity Commission under a single Commissioner.

Suppression of Gambling. Amends the Acts to legalize the broadcasting of barrier positions and jockeys.

Wheat Industry Stabilisation. Complementary to Commonwealth Act of same title.

South Australia.—Coal. Extends the operation of the Coal Act 1947, enabling the Government to control the distribution and use of coal and the consumption of gas and electricity, until the end of 1950.

Landlord and Tenant (Control of Rents). An amending Act extending rent control to premises other than dwelling-houses, and relating to the recovery of possession of premises; refers to matters previously dealt with under Commonwealth regulations.

Land Settlement. An amending Act, empowering the Minister of Lands to acquire, either compulsorily or by purchase, any land in the Western Division of the South-East of the State for the purpose of draining, and allotment in blocks.

Mental Institute Benefits. Empowers the Minister of Health to enter into an agreement with the Commonwealth extending the Hospital Benefits Scheme to mental hospitals.

Payment to Members of Parliament. Repeals Payments to Members of Parliament Acts 1936 and 1944, and increases payments to Members of Parliament.

Potato Marketing. Establishes a South Australian Potato Board and confers on it power to control the marketing of potatoes, but not to acquire and market them.

Prices. Provides for the control of prices and land sales; relates to matters previously dealt with under Commonwealth regulations.

River Murray Waters. Complementary to Commonwealth Act of same title.

South Eastern Drainage. An amending Act empowering the South Australian Drainage Board to construct drains and drainage works in the Western Division of the South East of the State.

Wheat Industry Stabilization. Complementary to Commonwealth Act of same title.

Western Australia.—*Increase of Rent (War Restrictions).* Amends and continues the operation of the 1939-1947 Act; relates to the recovery of possession of premises; refers to matters previously dealt with under Commonwealth regulations.

Industrial Arbitration. An amending Act permitting the appointment of a Conciliation Commissioner to assist the President and to be chairman of any industrial board constituted under the Act.

Land Sales Control. Provides for regulating and controlling prices payable in respect of certain transactions in land; relates to matters previously dealt with under Commonwealth regulations.

Matrimonial Causes and Personal Status Code. Amends and codifies the law relating to divorce, separation, nullity of marriage, custody of children and maintenance.

Mining. An amending Act providing for safe working of coal-mines and empowering enforcement of modern mining methods.

Prices Control. Provides for the control of prices and rates of certain goods and services; relates to matters previously dealt with under Commonwealth regulations.

Western Australian Marine. Consolidates a number of Acts and brings the marine laws of Western Australia into line with those of other States and the Commonwealth.

Wheat Industry Stabilisation. Complementary to Commonwealth Act of same title.

Workers' Compensation. An amending Act providing that all compensation matters be subject to control by a board; liberalizes benefits payable.

Tasmania.—*Adult Education.* Provides for the creation of an Adult Education Board to plan and supervise the development of adult education in the State.

Apple and Pear Marketing. Provides for the marketing of apples and pears during the year 1949; sets out functions of the Australian Apple and Pear Marketing Board and the State Committee.

Fruit Board. An amending Act providing that every fruit-grower must insure the fruit grown by him against loss or damage by hail.

Landlord and Tenant (Temporary Provisions). Provides for the continuation for a further period of the provisions of certain Commonwealth regulations relating to landlord and tenant.

Land Sales Control. Provides for the regulation and control of the prices payable in respect of certain transactions in land; relates to matters previously dealt with under Commonwealth regulations.

Parliamentary Salaries and Allowances. An amending Act authorizing increases in the rates of Parliamentary salaries and allowances.

Prices. Provides for the regulation and control of prices for certain goods and services; relates to matters previously dealt with under Commonwealth regulations.

§ 5. Commonwealth Government Departments.

Official Year Book No. 37 contains, on pp. 76-86, a list of the Commonwealth Government Departments as at 31st March, 1947, showing details of the matters dealt with by each Department, and the Acts administered by the Minister of each Department.

It is proposed to re-publish this information at intervals only, whenever changes in Departments and their functions make it desirable. Issue No. 12 (pp. 924-5) was the last prior to No. 37 to contain such detailed information, and included, in addition, similar particulars for the State Governments.

§ 6. Cost of Parliamentary Government.

The following statement shows the cost of parliamentary government in the Commonwealth and in each State, as well as the cost per head of population, for the year ended 30th June, 1948. In order to avoid incorrect conclusions as to the cost of the Governor-General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item "Governor's salary") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interest, and carried out at the request of the Government.

COST OF PARLIAMENTARY GOVERNMENT, 1947-48.

(£.)

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
1. Governor-General or Governor—								
Governor's salary	10,000	5,000	5,000	3,000	5,000	(a) 2,214	3,000	33,214
Other salaries	3,910	9,607	1,177	4,174	1,435	1,146	2,387	23,836
Other expenses, including maintenance of house and grounds	633,104	9,536	10,738	610,293	2,618	3,493	7,714	77,496
Total	47,014	24,143	16,915	17,467	9,053	6,853	13,101	134,546
2. Executive Council—								
Salaries of Officers	(c)	(c)	811	34	(d)	60	(d)	905
Other expenses	(e)	(c)	73	71	(d)	..	(d)	144
Total	(e)	(c)	884	105	(d)	60	(d)	1,049
3. Ministry—								
Salaries of Ministers	29,150	38,627	11,905	15,800	10,750	9,657	8,183	124,072
Travelling expenses	5,970	(e)	(e)	..	(e)	9,281	2,208	17,459
Other	307	1,036	(e)	..	(e)	326	3,118	4,787
Total	35,427	39,663	11,905	15,800	10,750	19,264	13,509	146,318
4. Parliament—								
A. Upper House :								
President and Chairman of Committees	2,000	2,700	1,754	..	1,000	2,405	299	10,158
Allowance to members	54,300	(f) 150	10,412	..	10,200	25,259	8,128	108,449
Railway passes	5,760	13,785	(g) 9,000	..	1,423	4,276	1,156	35,400
Postage for members	3,099	(h)	502	..	83	381	..	4,065
B. Lower House :								
Speaker and Chairman of Committees	2,000	3,790	(i) 2,517	2,600	1,800	2,321	349	15,377
Allowance to members	111,358	103,024	36,106	46,329	19,720	43,674	11,142	371,335
Railway passes	12,000	23,195	(j)	12,560	2,774	6,860	1,996	59,385
Postage for members	6,100	(j) 3,370	1,686	2,550	491	633	..	14,830
C. Both Houses :								
Standing Committee on Public Works—								
Expenses of members .. ..	..	..	(k)	..	1,900	..	664	2,564
Salaries of staff and contingencies .. ..	..	..	(k)	..	1,322	..	75	1,397
Printing—								
<i>Hansard</i>	15,642	5,384	10,022	4,973	3,520	4,438	..	43,979
Other	12,837	8,161	5,491	2,199	7,946	4,411	4,589	45,634
Reporting staff—								
Salaries	18,405	9,870	8,413	4,033	8,129	8,466	..	57,316
Contingencies	637	186	118	..	588	212	..	1,741
Library—								
Salaries	14,526	4,807	3,423	1,937	1,601	100	..	26,394
Contingencies	6,290	1,695	999	1,050	668	240	178	11,150
Salaries of other officers	86,081	44,709	19,660	12,687	10,853	12,591	5,298	191,879
Other	160,311	4,459	..	..	55,081	2,511	..	72,362
D. Miscellaneous :								
Fuel, light, heat, power, and water	1,108	1,652	1,682	1,387	2,398	63	..	..
Posts, telegraphs, telephones	8,103	4,786	1,443	3,845	1,124	405	741	44,833
Furniture, stores, and stationery	6,642	4,946	..	938	4,995	575	..	..
Other	78,510	7,729	247	6,931	2,234	717	3,913	109,281
Total	514,709	248,398	113,475	102,019	89,880	120,538	38,528	1,227,547

(a) Salary of Lieutenant-Governor. (b) Commonwealth—includes interest and sinking funds on loans, £4,446: Queensland—includes £850 allowance to Lieutenant-Governor. (c) Included under Governor-General or Governor. (d) Duties performed by Chief Secretary's Department. (e) Not available separately. (f) Allowance to representative of Government, Legislative Council. (g) Both Houses. (h) Included with Lower House. (i) Includes Leader of the Opposition and Leader of the Third Party. (j) Included with Upper House. (k) There is no Standing Committee, but a Public Works Committee—Members, £1,048; Staff and contingencies £1,242. (l) Conveyance and travelling expenses, other than railway, of members. (m) Includes Parliamentary Committee on Land Settlement, £3,513, and Joint Committee on Subordinate Legislation, £350. (n) Includes interest and sinking fund, Parliament House, Canberra, £36,144, and maintenance of members' rooms in capital cities, £20,446.

COST OF PARLIAMENTARY GOVERNMENT, 1947-48—continued.
(£.)

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
5. Electoral—								
Salaries	111,609	3,778	1,573	5,548	9,794	7,851	(d)	140,153
Cost of elections, contingencies, etc.	186,364	18,822	44,137	17,319	3,528	8,772	4,925	283,867
Total	297,973	22,600	45,710	22,867	13,322	16,623	4,925	424,020
6. Royal Commissions, Select Committees, etc.	10,353	202	3,174	..	407	9,735	1,893	25,764
Total	10,353	202	3,174	..	407	9,735	1,893	25,764
GRAND TOTAL	905,476	335,006	192,063	158,258	123,412	173,073	71,956	1,959,244
Cost per head of population	2s. 4d.	2s. 3d.	1s. 10d.	2s. 10d.	3s. 9d.	6s. 10d.	5s. 6d.	5s. 2d.

(d) Duties performed by Chief Secretary's Department.

During 1946-47 the amounts expended for all Governments under the major headings were:—Governor-General or Governor, £129,181; Ministry, £120,348; Parliament, £1,028,887; Electoral, £511,205.

Figures for total cost and cost per head during each of the years 1943-44 to 1947-48 in comparison with 1938-39 are shown in the next table.

COST OF PARLIAMENTARY GOVERNMENT.

Year.	C'wealth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
TOTAL. (£.)								
1938-39 ..	516,455	232,709	114,497	106,942	97,383	113,793	49,270	1,231,049
1943-44 ..	664,042	252,589	140,079	131,443	90,943	117,767	52,090	1,448,953
1944-45 ..	678,542	225,392	125,374	114,923	98,420	112,707	52,150	1,407,508
1945-46 ..	607,983	240,392	179,733	131,449	102,940	120,396	68,663	1,451,556
1946-47 ..	800,542	346,970	145,532	171,460	114,360	143,957	77,970	1,800,791
1947-48 ..	905,476	335,006	192,063	158,258	123,412	173,073	71,956	1,959,244

PER HEAD OF POPULATION.

	(s. d.)							
1938-39 ..	1 6	1 8	1 3	2 1	3 3	4 10	4 2	3 7
1943-44 ..	1 10	1 9	1 5	2 6	2 11	4 11	4 3	4 0
1944-45 ..	1 10	1 7	1 3	2 2	3 2	4 8	4 3	3 10
1945-46 ..	1 8	1 8	1 9	2 5	3 3	4 11	5 6	3 11
1946-47 ..	2 2	2 4	1 5	3 2	3 7	5 9	6 2	4 9
1947-48 ..	2 4	2 3	1 10	2 10	3 9	6 10	5 6	5 2

§ 7. Government Employees.

1. Australia, 1939 to 1949.—The following table shows at June in each of the years 1945 to 1949, in comparison with 1939, the number of employees of Commonwealth and Allied Governments, State Government and Semi-Government bodies, and Local Government authorities. These include not only administrative employees but also employees engaged in all other Government activities, e.g., business undertakings, public utilities, construction of public works, munitions manufacture and in factories connected with Government undertakings and utilities. Personnel serving in the Defence Forces are excluded.

GOVERNMENT EMPLOYEES : AUSTRALIA.

June—	Commonwealth and Allied Governments.(a)			State Govt. and Semi-Government Bodies.			Local Government Authorities.(b)			Total.		
	M.	F.	Persons.	M.	F.	Persons.	M.	F.	Persons.	M.	F.	Persons.
1939(c) ..	56,009	11,764	67,863	235,066	40,586	275,652	58,637	2,887	61,524	349,802	55,237	405,039
1945 ..	126,212	65,803	192,015	234,359	54,812	289,071	39,106	4,231	43,337	400,177	124,840	525,023
1946 ..	108,756	40,967	149,723	276,909	49,396	326,305	49,381	3,006	52,387	415,046	94,969	529,015
1947 ..	120,287	38,187	158,474	296,982	50,121	347,103	54,783	3,778	58,561	472,052	92,086	564,138
1948 ..	130,420	38,375	168,795	306,835	52,563	359,398	56,808	3,946	60,754	494,063	94,884	588,947
1949 ..	142,019	40,197	182,216	321,992	55,718	377,710	58,703	4,277	62,980	522,714	100,192	622,906

(a) Includes British and United States of America authorities' civilian employees in Australia. estimated.

(c) July.

(b) Partly

2. Commonwealth and States, etc., June, 1948 and 1949.—The number of employees of the Commonwealth and State Governments, Semi-Government and Local Government authorities in each State as at June, 1948 and 1949, are shown in the following table :—

GOVERNMENT EMPLOYEES, JUNE, 1948 AND 1949.

Employed by—	1948.			1949.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
Commonwealth ..	130,420	38,375	168,795	142,019	40,197	182,216
New South Wales ..	141,894	20,429	162,323	147,775	21,859	169,634
Victoria ..	89,846	17,291	107,137	93,270	17,867	111,137
Queensland ..	59,523	6,127	65,650	62,004	6,663	68,667
South Australia ..	30,995	5,984	36,979	33,710	6,501	40,211
Western Australia ..	29,143	4,238	33,381	30,658	4,521	35,179
Tasmania ..	12,242	2,440	14,682	13,278	2,584	15,862
Total ..	494,063	94,884	588,947	522,714	100,192	622,906

§ 8. Diplomatic and other Representatives Overseas and in Australia.

Australia has diplomatic and other representatives in the United Kingdom, Canada, New Zealand, Union of South Africa, Eire, India, Pakistan, Ceylon, Malaya, Egypt, the United States of America, Brazil, China, France, the Netherlands, the Union of Soviet Socialist Republics and other countries, in all more than twenty. In addition, there are the Australian delegates to the United Nations at New York and Australian representatives in Germany and Japan.

Countries represented in Australia by diplomatic and other representatives include the following :—The United Kingdom, Canada, New Zealand, Union of South Africa, Eire, India, Pakistan, Malta, the United States of America, Brazil, China, Denmark, France, the Netherlands, Norway, Sweden and the Union of Soviet Socialist Republics. Including those with consular representatives, who number about 160, there are about fifty countries represented.

For particulars of the various diplomatic and other representatives overseas and in Australia see Chapter XXVIII.—Miscellaneous. Full details of British and foreign representation in Australia—diplomatic and consular—may be obtained from a publication issued by the Department of External Affairs, Canberra, entitled “Diplomatic and Consular List, including British Commonwealth Representatives and Trade Commissioners in Australia.”

CHAPTER IV.

LAND TENURE AND SETTLEMENT.

§ 1. Introduction.

1. **General.**—A comprehensive description of the land tenure systems of the several States is given in Official Year Book No. 4 (pp. 235-333), while later alterations are referred to in subsequent issues. In this chapter a summary is given of the principal features of existing land legislation. In previous issues an account is given of the various tenures under which Crown lands may be taken up. (*See* Official Year Book No. 22, pp. 133-195; also par. 2 hereunder for a conspectus of legislation at present in force). Special sections are devoted to closer settlement, the settlement of returned service personnel on the land and advances to settlers. Particulars as to the areas of land alienated in each State and similar matter are also included.

2. **State Land Legislation.**—The legislation in force relating to Crown Lands, Closer Settlement, Settlement of Returned Service Personnel and other matters dealt with in this chapter is summarized in the following conspectus :—

STATE LAND LEGISLATION.

New South Wales.	Victoria.	Queensland.
CROWN LANDS ACTS.		
Crown Lands Act 1913-1948: Western Lands Act 1901-1945: Prickly Pear Act 1924-1948.	Land Acts 1928-1941: Land (Crown Leases Adjustment) Act 1936: Land (Residence Area) Act 1935: Land Act 1941: Land Settlement (Ac- quisition) Act 1943: Agri- cultural College Act 1944.	Land Acts 1910-1948: Rabbit Acts 1913-1943: Upper Burnett and Callide Land Settlement Acts 1923-1932: Prickly Pear Land Acts 1923- 1941: Sugar Workers' Sele- ctions Acts 1923-1936: Stock Routes Improvement and Animal and Vegetable Pests Destruction Acts 1936-1938: Stock Routes and Rural Lands Protection Acts 1944-1948.

CLOSER SETTLEMENT ACTS.

Closer Settlement Act 1904-1948.	Closer Settlement Act 1938. Closer Settlement (Disposal of Land) Act 1948.	Closer Settlement Acts 1906- 1941.
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RESUMPTION ACTS (ALIENATED LAND).

		Public Works Land Resumption Acts 1906-1940: War Service Land Settlement Acquisition Acts 1945-1948.
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MINING ACTS.

Mining Act 1906-1946: Mining Leases (Validation) Act 1946.	Mines Acts 1928-1942: Mines (Petroleum) Acts 1935-1943: Mines (Minerals) Act 1944.	Mining Acts 1898-1948: Mining for Coal and Mineral Oil Acts 1912-1941: Petroleum Acts 1923-1939: Miners' Home- stead Leases Acts 1913-1947: Coal Mining Acts 1925-1948: Mining on Private Land Acts 1909-1929, as amended by the Mining Acts Amendment Act 1930.
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STATE LAND LEGISLATION—*continued.*

New South Wales.

Victoria.

Queensland.

RETURNED SERVICE PERSONNEL SETTLEMENT ACTS.

Returned Soldiers' Settlement Act 1916-1945: War Service Land Settlement Act 1941-1948.

Soldier Settlement Act 1945.

Discharged Soldiers' Settlement Acts 1917-1945: War Service Land Settlement Agreement Act 1945: War Service Land Settlement Acquisition Acts 1945-1948: War Service Land Settlement Acts 1946-1948: War Service (Sugar Industry) Land Settlement Act 1946.

ADVANCES TO SETTLERS ACTS.

Government Savings Bank Act 1906-1947: Returned Soldiers' Settlement Act 1916-1945: Rural Bank Agency Act 1934: Farmers' Relief Act 1932-1947: Rural Reconstruction Act 1939-1940.

State Savings Bank Acts 1915-1922: Primary Products Advances Acts 1919-1922: Fruit and Vegetable Act 1928: Farmers Advances Acts and Drought Relief Act 1940: Farm Water Supplies Advances Act 1944: Farmers Advances Act 1944: Drought Relief Acts 1944-1947.

State Advances Acts 1916-1934: Co-ordination of Rural Advances and Agricultural Bank Acts 1938-1947: Farmers' Assistance (Debts Adjustment) Acts 1935-1945: Financial Arrangements and Development Aid Acts 1942-1947: Marsupial Proof Fencing Acts 1898-1944: Wire and Wire-netting Advances Acts 1927-1944: Wire and Wire-netting Advances Acts 1933-1944: Discharged Soldiers' Settlement Acts 1917-1945: Re-establishment and Employment Act 1945: War Service Land Settlement Acts 1946-1948.

South Australia.

Western Australia.

Tasmania.

CROWN LANDS ACTS.

Crown Lands Act 1929-1944: Pastoral Act 1936-1944: Marginal Lands Act 1940: Crown Lands Development Act 1943.

Land Act 1933-1948.

Crown Lands Act 1935.

CLOSER SETTLEMENT ACTS.

Crown Lands Act 1929-1944: Land Settlement Act 1944.

Closer Settlement Act 1927.

Closer Settlement Act 1929-1945, incorporating Commonwealth and State War Service Land Settlement Agreement Act 1945-1948.

MINING ACTS.

Mining Act 1930-1946: Mines and Works Inspection Act 1920-1935: Mining (Petroleum) Act 1940: Broken Hill Proprietary Company's Indenture Act 1937: Leigh Creek Coal Act 1942.

Mining Act 1904-1937: Sluicing and Dredging for Gold Act 1899: Petroleum Act 1936-1940: Mines Regulation Act 1906: Mining Development Act 1902-1924: Inspection of Machinery Act 1921: Gold Buyers Act 1921: Coal Mines Regulation Act 1902-1926: Miners' Phthisis Act 1922: Mine Workers Relief Act 1932: Mining Tenements (War-time) Exemptions Act 1942.

Mining Act 1929: Aid to Mining Act 1927: Mines and Works Regulation Act 1915.

STATE LAND LEGISLATION—*continued.*

South Australia.	Western Australia.	Tasmania.
RETURNED SERVICE PERSONNEL SETTLEMENT ACTS.		
Discharged Soldiers' Settlement Act 1934-1940: War Service Land Settlement Agreement Act 1945.	Discharged Soldiers' Settlement Act 1918: War Service Land Settlement Agreement Act 1945: War Service Land Settlement Agreement (Land Application) Act 1945.	Closer Settlement Act 1929-1945, incorporating Commonwealth and State War Service Land Settlement Agreement Act 1945-1948.
AGRICULTURAL GRADUATES SETTLEMENT ACTS.		
Agricultural Graduates Act 1922-1938: Eyre Peninsula Land Purchase Act 1946.		
ADVANCES TO SETTLERS ACTS.		
Irrigation Act 1930-1945: Discharged Soldiers' Settlement Act 1934-1940: State Bank Act 1925-1941: Advances to Settlers Act 1930-1944: Agricultural Graduates Act 1922-1938: Loans for Fencing and Water Piping Act 1938-1940: Vermin Act 1931-1945.	Rural and Industries Bank Act 1944: Rural Relief Fund Act 1935.	State Advances Act 1935: Closer Settlement Act 1929-1939: Unemployed (Assistance to Primary Producers) Relief Act 1930-1934: Farmers' Debt Adjustment Act 1936.

3. **Northern Territory Land Legislation.**—In the Northern Territory of Australia the legislation relating to Crown lands is embodied in the Crown Lands Ordinance 1931-1948, the Darwin Town Area Leases Ordinance 1947 and the Darwin Short Term Leases Ordinance 1946; that relating to mining in the Mining Ordinance 1939-1947, the Mining (Royalty Suspension) Ordinance 1943, the Gold Dredging Act 1899 of South Australia, the Mineral Oil and Coal Ordinance 1922-1923, the Mining Development Ordinance 1939-1940, and the Mines Regulation Ordinance 1939; and that relating to advances to settlers in the Encouragement of Primary Production Ordinance 1931-1938.

4. **Australian Capital Territory Land Legislation.**—In the Australian Capital Territory the Ordinances relating to Crown lands are the Leases Ordinance 1918-1937, the City Area Leases Ordinance 1936-1947, the Church Lands Leases Ordinance 1924-1932, and the Leases (Special Purposes) Ordinance 1925-1943.

5. **Administration and Classification of Crown Lands.**—In each of the States there is a Lands Department under the direction of a Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown lands. The administrative functions of most of the Lands Departments are to some extent decentralized by the division of the States into what are usually termed Land Districts, in each of which there is a Lands Office, which deals with applications for selections and other matters generally appertaining to the administration of the Acts within the particular district. In some of the States there is a local Land Board or a Commissioner for each district or group of districts. In the Northern Territory the Administrator, under the control of the Minister for the Interior, is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Australian Capital Territory the administration of the Leases Ordinances is in the hands of the Department of the Interior.

Crown lands are generally classified according to their situation, the suitability of the soil for particular purposes, and the prevailing climatic and other conditions. The modes of tenure under the Acts, therefore, as well as the amount of purchase-money or rent, and the conditions as to improvements and residence, vary considerably. The administration of special Acts relating to Crown lands is in some cases in the hands of a Board under the general supervision of the Minister.

In each of the States there is also a Mines Department which is empowered under the several Acts relating to mining to grant leases and licences of Crown lands for mining and allied purposes. In the Northern Territory there are several ordinances relative to mining.

6. **Classification of Tenures.**—The tabular statement which follows shows the several tenures under which Crown lands may be acquired or occupied in each State. In the Northern Territory, leases (except pastoral and “miscellaneous”) are granted in perpetuity, pastoral and “miscellaneous” leases being restricted to periods of not more than 42 and 21 years respectively. The Lands Ordinance provides also for the grant in fee simple of town lands, agricultural lands, garden lands and tropical lands, and for the issue of grazing, occupation and “miscellaneous” licences. The mining leases and holdings are, generally speaking, similar to those of the States. In the Australian Capital Territory leases only are issued.

STATE CROWN LANDS : TENURES.

New South Wales.	Victoria.	Queensland.
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FREE GRANTS AND RESERVATIONS.

Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
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UNCONDITIONAL PURCHASES OF FREEHOLD.

Auction Sales : After-auction Purchases : Special Purchases : Improvement Purchases.	Auction Sales.
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CONDITIONAL PURCHASES OF FREEHOLD.

Residential Conditional Purchases : Non-residential Conditional Purchases : Additional Conditional Purchases : Conversions of various Leasehold Tenures into Conditional Purchases : Purchases of Town Lands Leases, Suburban Holdings, Returned Soldiers' Special Holdings, Residential Leases, Week-end Leases.	Residential Selection Purchase Leases : Non-residential Selection Purchase Leases : Licences of Auriferous worked-out Lands : Conditional Purchase Leases of Swamp or Reclaimed Lands : Selection Purchase Leases of Mallee Lands : Murray River Settlement : Special Settlement Areas : Conversions into Selection Purchase Leases.
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LEASES AND LICENCES UNDER LAND ACTS.

Conditional Leases : Conditional Purchase Leases : Special Conditional Purchase Leases : Homestead Selections : Homestead Farms : Settlement Leases : Special Leases : Annual Leases : Scrub Leases : Snow Leases : Inferior Lands Leases : Crown Leases : Improvement Leases and Leases under Improvement Conditions : Occupation Licences : Leases of Town Lands : Suburban Holdings : Week-end Leases : Residential Leases : Leases in Irrigation Areas : Western Lands Leases : Forest Leases : Forest Permits : Prickly Pear Leases.	Perpetual Leases : Auriferous Lands Licences : Leases of Swamp or Reclaimed Lands : Perpetual Leases of Swamp or Reclaimed Lands : Grazing Licences : Perpetual Leases (Mallee) : Miscellaneous Leases and Licences : Bee Farm Licences : Bee Range Area Licences : Eucalyptus Oil Licences : Forest Leases : Forest Licences : Forest Townships : Land (Residence Areas).	Perpetual Lease Selections : Perpetual Lease Prickly Pear Selections : Perpetual Lease Prickly Pear Development Selections : Grazing Selections : Development Grazing Selections : Prickly Pear Development Grazing Selections : Pastoral Holdings : Preferential Pastoral Holdings : Pastoral Development Holdings : Stud Holdings : Forest Grazing Leases : Occupation Licences : Special Leases : Perpetual Town, Suburban and Country Leases.
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STATE CROWN LANDS: TENURES—*continued.*

New South Wales.	Victoria.	Queensland.
CLOSER SETTLEMENT.		
Sales by Auction and Tender : After-auction Sales and Tenders : Settlement Pur- chases : Settlement Purchase Leases : Closer Settlement Leases.	Sales of Land : Conditional Pur- chase Leases : Conditional Pur- chase Leases in Mountainous Areas.	Perpetual Lease Selections : Settlement Farm Leases : Perpetual Town, Suburban and Country Leases.

LEASES AND LICENCES UNDER MINING ACTS.

Holdings under Miners' Rights and Business Licences : Gold- mining Leases : Mineral Leases : Dredging Leases : Special Leases : Mining Pur- pose Leases : Authorities to Prospect (Section 17).	Holdings under Miners' Rights : Gold-mining Leases : Mineral Leases : Water Right Licences : Petroleum Prospecting Licen- ces : Petroleum Mineral Leases.	Holdings under Miners' Rights : Permits to Prospect for Petro- leum : Petroleum Leases : Licences to Prospect for Coal and Mineral Oil : Gold- mining Leases : Mineral Leases : Coal-mining Leases : Business Areas : Residence Areas : Miners' Homestead Leases and Miners' Homestead Perpetual Leases : Dredging Leases : Mineral Oil Leases.
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SETTLEMENT OF RETURNED SERVICE PERSONNEL.

1914-18 War—Soldiers' Group Purchases : Group Purchase Leases : Returned Soldiers' Special Holding Leases : Re- turned Soldiers' Special Holding Purchases : also Pur- chases and Leases under Crown Lands Act and Allied Acts of lands set apart for application by discharged soldiers ex- clusively : 1939-45 War— Closer Settlement Leases.	(Same Tenures as under the Land and Closer Settlement Acts. <i>See also</i> Soldier Settlement Act 1945 above.)	1914-18 War—Perpetual Lease Selections : Perpetual Town and Suburban Leases : 1939- 45 War—Perpetual Lease Selections and Grazing Selec- tions.
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South Australia.	Western Australia.	Tasmania.
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FREE GRANTS AND RESERVATIONS.

Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
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UNCONDITIONAL PURCHASES OF FREEHOLD.

Auction Sales : By Private Contract (Land passed at Auction).	Auction Sales.	Auction Sales : After-auction Sales : Sales of Land in Mining Towns.
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CONDITIONAL PURCHASES OF FREEHOLD.

Agreements to Purchase : Special Agreements to Purchase (40 years' term) : Homestead Blocks : Town of Whyalla Allotments in fee simple.	Conditional Purchases with Resi- dence : Conditional Purchases without Residence : Conditional Purchases by Direct Payment : Conditional Purchase of Land for Vineyards, etc. : Condi- tional Purchases by Pastoral Lessees : Conditional Pur- chases of Grazing Lands : Homestead Farms : Special Settlement Leases.	Selections for Purchase : Addi- tional Selections for Purchase : Sales by Auction : Sales by Private Contract : After- auction Sales : Special Settle- ment Areas.
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STATE CROWN LANDS: TENURES—*continued*.

South Australia.	Western Australia.	Tasmania.
LEASES AND LICENCES UNDER LAND ACTS.		
Perpetual Leases: Special Perpetual Leases (Free Period): Perpetual Leases of Homestead Blocks: Miscellaneous Leases: Licences: Pastoral Leases: Irrigation Blocks: Town Allotments in Irrigation Areas and Town of Whyalla: Forest Leases: Perpetual Leases Marginal Lands.	Pastoral Leases: Special Leases: Leases of Town and Suburban Lands: Cropping Leases.	Grazing Leases: Pastoral Leases: Leases of Land covered with Buffon Grass, etc.: Leases of Mountainous Land: Miscellaneous Leases: Temporary Licences: Occupation Licences: Residences Licences: Business Licences: Forest Leases, Licences and Permits

CLOSER SETTLEMENT.

Sales by Auction: Agreements to Purchase: Perpetual Leases: Miscellaneous Leases: Licences.	Conditional Purchases: Town and Suburban Areas.	Leases with Right of Purchase: Special Sales.
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LEASES AND LICENCES UNDER MINING ACTS.

Holdings under Mining Acts: Search Licences: Occupation Licences: Gold Leases: Mineral Leases: Coal Leases: Oil Licences: Dredging Leases: Business Licences: Residence Areas: Miscellaneous Leases (Salt and Gypsum).	Holdings under Miners' Rights: Gold-mining Leases: Mineral Leases: Business Areas: Residence Areas: Miners' Homestead Leases.	Holdings under Miners' Rights: Prospectors' Licences: Gold-mining Leases: Mineral Leases: Mining Easements: Dam Sites.
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SETTLEMENT OF RETURNED SERVICE PERSONNEL.

Perpetual Leases: Pastoral Leases: Agreements to Purchase: Miscellaneous Leases: Licences: War Service Perpetual Leases and War Service Irrigation Perpetual Leases.	Ordinary Tenure: Special Tenure.	Free Grants: Ordinary Tenure: Special Tenure.
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AGRICULTURAL GRADUATES SETTLEMENT.

Agreements to Purchase: Perpetual Leases.	
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§ 2. Free Grants and Reservations.

1. *New South Wales*.—(i) *Free Grants*. Crown lands may, by notification in the *Gazette*, be dedicated for public purposes and be granted therefor in fee simple. Such lands may be placed under the care and management of trustees, not less than three in number, appointed by the Minister.

(ii) *Reservations*. Temporary reservations of Crown lands from sale or lease may be made by the Minister.

(iii) *Areas Granted and Reserved*. During 1946-47 and 1947-48 1,631 and 1,572 acres respectively were permanently reserved or dedicated for miscellaneous parks and

recreation reserves and for other public purposes, the number of separate localities or areas being 115 and 82 respectively. The areas reserved at 30th June, 1947 and 1948 were as follows :—

AREAS TEMPORARILY AND PERMANENTLY RESERVED : NEW SOUTH WALES.

(Acres.)

At 30th June—	Travelling Stock.	Pending Classification and Survey.	Forest Reserves.	Water and Camping Reserves.	Mining Reserves.	Recreation and Parks.	Other Reserves.	Total Area Reserved. (a)
1947 ..	5,330,327	4,055,348	2,083,032	836,743	1,217,525	419,633	4,079,554	18,022,162
1948 ..	5,327,695	4,155,138	2,083,095	833,309	1,215,757	420,665	3,986,921	18,022,580

(a) Includes areas occupied under annual, special, scrub or forestry leases, or under occupation licences or permissive occupancy, included under the appropriate leasehold tenures in following sections.

2. **Victoria.**—(i) *Free Grants.* The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.

(ii) *Reservations.* The Governor may temporarily or permanently reserve from sale, lease or licence any Crown lands required for public purposes.

(iii) *Areas Granted and Reserved.* During 1947 and 1948 73 and 3 acres respectively were granted without purchase. The areas both temporarily and permanently reserved at the end of 1947 and 1948 were as follows :—

AREAS TEMPORARILY AND PERMANENTLY RESERVED : VICTORIA.

(Acres.)

At 31st December—	Roads.	Water Reserves.	Agricultural Colleges, etc.	Forest and Timber Reserves.		Reserves in the Mallee.	Other Reserves.	Total Area Reserved.
				Under Forests Acts. (a)	Under Land Acts.			
1947 ..	1,794,218	315,919	8,434	4,939,494	161,943	410,000	549,384	8,179,392
1948 ..	1,794,218	315,309	8,434	4,939,494	161,941	410,000	549,392	8,178,788

(a) Timber Reserves, included in figures, amounted to 879,394 acres in each year.

(iv) *Revoking of Agricultural Reservations.* Under the Agricultural Colleges Act 1944, the lands on which the agricultural colleges and experimental farms at Longerenong (2,386 acres) and Dookie (6,048 acres) are established, are permanently reserved as sites for the purposes of State Agricultural Colleges, and the remainder of the lands previously reserved has become unalienated for treatment as such under the Land Acts. See also § 5, para. 3 following.

3. **Queensland.**—(i) *Free Grants.* The Governor may grant in trust any Crown land which is or may be required for public purposes. Under the Irrigation Act, land to be used for the purpose of any undertaking under that Act may be vested in fee simple in the Irrigation Commission.

(ii) *Reservations.* The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease them for not more than 21 years with the approval of the Minister.

Under the State Forests and National Parks Acts, the Governor may permanently reserve any Crown lands and declare them to be a State Forest or a National Park.

(iii) *Areas Granted and Reserved.* During 1947 and 1948 respectively the areas granted in fee simple without payment were nil, the area set apart as reserves 785,244 and 717,310 acres, and reserves cancelled 245,993 and 243,487 acres. The areas reserved, including roads, at the end of 1947 and 1948 were as follows :—

AREAS RESERVED : QUEENSLAND.

(Acres.)

		Timber Reserves.	State Forests and National Parks.	Aboriginal Reserves.	Streets, Surveyed Roads and Stock Routes.	General.	Total Area Reserved.
At 31st December—							
1947..	..	3,123,065	4,300,462	6,471,986	3,454,000	5,658,358	23,016,871
1948..	..	3,116,020	4,751,152	6,517,749	3,479,754	5,651,773	23,516,448

4. *South Australia.*—(i) *Free Grants.* The Governor may dedicate Crown lands for any public purpose and grant the fee simple of such lands, with the exception of foreshores and land for quays, wharves or landing-places, which are inalienable in fee-simple from the Crown.

(ii) *Reservations.* The Governor may reserve Crown lands for the use and benefit of aborigines, military defence, forest reserves, railway stations, park lands or any other purpose that he may think fit.

(iii) *Areas Granted and Reserved.* During 1946-47 and 1947-48 respectively, free grants were issued for areas of 67 and 96 acres, and reserves comprising 6,768 and 9,473 acres were proclaimed. At 30th June, 1947 and 1948, the total area of surveyed roads, railways and other reserves was 20,263,100 and 20,272,573 acres respectively, including at each date 16,726,400 acres in the north-west of the State set apart as an aboriginal reserve in 1921, and 595,200 acres at Ooldea, adjoining the transcontinental railway, reserved for a similar purpose in 1940.

5. *Western Australia.*—(i) *Free Grants.* The Governor may dispose of, in such manner as for the public interest may seem best, any lands vested in the Crown for public purposes, and may grant the fee simple of any reserve to secure the use thereof for the purpose for which such reserve was made.

(ii) *Reservations.* The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased by the Governor for periods up to 10 years. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.

(iii) *Areas Granted or Reserved.* During the years ended 30th June, 1947 and 1948, approximately 673,105 and 78,975 acres respectively were reserved for various purposes. At 30th June, 1948 (figures at 30th June, 1947, in parentheses), the total area reserved was 50,409,691 (50,328,930) acres, comprising State forests, 3,399,799 (3,398,013) acres, timber reserves 1,789,133 (1,789,133) acres, and other reserves 45,220,759 (45,141,784) acres.

6. *Tasmania.*—(i) *Free Grants.* No mention is made in the Crown Lands Act respecting free grants of land, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act. Under the Returned Soldiers' Settlement Act 1916, returned soldiers who applied prior to 31st March, 1922 were eligible to receive free grants of Crown land not exceeding £100 each in value, but these grants were conditional on the land being adequately improved.

(ii) *Reservations.* The Governor in Council may except from sale or lease, and reserve to His Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

(iii) *Areas Granted or Reserved.* The total area reserved at the end of 1947 and 1948 was 2,937,684 and 3,967,808 acres respectively, excluding 22,319 and 21,724 acres respectively of land occupied by Commonwealth and State Departments.

7. *Northern Territory.*—(i) *Reservations.* The Governor-General may resume for public purposes any Crown lands not subject to any right of, or contract for, purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the lands so resumed.

(ii) *Areas Reserved.* The total area of reserves at 30th June, 1947 and 1948 respectively was 69,334 and 71,018 square miles, comprising aboriginal native, 68,103 and 69,015 square miles; and other reserves, 1,231 and 2,003 square miles.

8. *Summary.*—The following table shows the total areas reserved in each State, and the grand totals, for the years 1944 to 1948:—

AREAS RESERVED.

('000 Acres.)

Year.	N.S.W. (a)	Victoria. (b)	Q'land. (b)	S. Aust. (a)	W. Aust. (a)	Tasmania. (b)	Nor. Terr. (a)	Total.
1944 ..	18,319	8,216	21,720	20,222	49,596	2,828	44,324	165,225
1945 ..	17,747	8,137	22,143	20,240	49,628	2,885	44,324	165,104
1946 ..	17,872	8,171	22,460	20,256	54,816	2,889	44,374	170,838
1947 ..	18,022	8,179	23,017	20,203	50,329	2,938	44,374	167,122
1948 ..	18,023	8,179	23,516	20,273	50,410	3,969	45,452	169,822

(a) At 30th June.

(b) At 31st December.

§ 3. Unconditional Purchases of Freehold.

1. *New South Wales.*—(i) *Auction Purchases.* Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively. At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within three months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding ten years, 4 per cent. interest being charged. Town blocks in irrigation areas may also be sold by auction.

(ii) *After-Auction Purchases.* In certain cases, land offered at auction and not sold may be purchased at the upset price. A deposit in accordance with the terms and conditions under which the land was previously offered must be lodged, and, if the application be approved by the Minister, the balance of purchase money is payable as required by the specified terms and conditions.

(iii) *Special Purchases.* Under certain circumstances, land may be sold in fee simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchase-money. The minimum upset price per acre is the same as in the case of land sold by auction. Areas not exceeding 5 acres in extent may be sold to recognized religious bodies and public authorities at prices determined by the local land board.

(iv) *Improvement Purchases.* The owner of improvements in land, in authorized occupation by residence under any Mining or Western Lands Act of land within a gold-field or mineral field, may purchase such land without competition at a price determined by the local Land Board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed $\frac{1}{4}$ acre within a town or village, or 2 acres elsewhere, and no person may purchase more than one such area within 3 miles of a similar prior purchase by him.

(v) *Areas Sold.* During the year ended 30th June, 1948 (figures for year ended 30th June, 1947 in parentheses) the total area sold was 361 (469) acres, of which 3 (5) acres were sold by auction and 48 (98) acres as after-auction purchases, while 22 (13) acres were sold as improvement purchases and 137 (316) acres as special purchases. The amount realized for the sale of the whole area was £23,220 (£24,415).

2. *Victoria.*—(i) *General.* Lands, not exceeding 100,000 acres in any one year, specially classed for sale by auction, may be sold by auction in fee simple at an upset price not less than £1 per acre. The purchaser must pay the survey fee at the time of the sale, together with a deposit of 12½ per cent. of the whole price; the residue is payable in equal half-yearly instalments with interest. Any unsold land in a city, town or borough, areas specially classed for sale, isolated pieces of land not exceeding 150 acres in area, and sites for churches or charitable purposes, if not more than 3 acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.

(ii) *Areas sold at Auction and by Special Sales.* During 1947 and 1948 totals of 1,248 and 1,480 acres respectively were disposed of under this tenure. 1,016 and 1,000 acres being country lands and 232 and 414 acres town and suburban lands.

3. *Queensland.*—(i) *General.* From 1917 to 1929 the law precluded land being made available for any class of selection which gave the selector the right to acquire the freehold title. Amending legislation giving power to make land available under freehold tenures was passed in 1929 but this provision was repealed by the Act of 1932.

(ii) *Areas Sold, etc.* During 1947 unconditional selections made freehold totalled 125 acres. In 1948 no unconditional selections were made freehold.

4. *South Australia.*—(i) *Sales by Auction.* The following lands may be sold by auction for cash :—(a) special blocks; (b) Crown lands which have been offered for lease and not taken up within two years; (c) town lands; and (d) suburban lands which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent. of the purchase money in cash, and the balance within one month or within such extended time as the Commissioner of Crown Lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged within six years without the consent of the Commissioner. If the Commissioner of Crown Lands so determines, town lands may also be offered at auction on terms that the buyer may at his option purchase the lands for cash or on agreement for sale and purchase.

(ii) *Areas Sold, etc.* During the years ended 30th June, 1947 and 1948 the area of town lands and special blocks sold by auction was 59 and 25 acres respectively. In addition, 82,259 and 134,360 acres respectively were sold at fixed prices, and the purchases of 41,265 and 73,105 acres respectively on credit were completed, making a total of 123,583 and 207,490 acres respectively.

5. *Western Australia.*—(i) *Sales by Auction.* Town, suburban and village lands must be sold by auction after being surveyed into lots and notified in the *Gazette*. Ten per cent. of the purchase-money must be paid in cash together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within two years, and no Crown grant may be issued until the land is fenced.

(ii) *Areas Sold.* During the years ended 30th June, 1947 and 1948 the area of town and suburban allotments sold by auction was 864 and 766 acres in 413 and 363 allotments respectively.

6. *Tasmania.*—(i) *Sales by Auction.* Town lands may be sold by auction for cash or on credit. No town land, the price of which is less than £15, may be sold on credit.

(ii) *After-auction Sales.* Town lands, not within 5 miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset prices by private contract.

(iii) *Sales of Land in Mining Towns.* Any person being the holder of a residence licence or business licence who shall be in lawful occupation of any residence area or business area, and who shall be the owner of buildings and permanent improvements upon such land of a value equal to or greater than the upset price of such area, shall be entitled to purchase such area at the upset price at any time prior to the day on which such area is to be offered for sale as advertised. The upset price for such area shall not be less than £10, excluding the value of improvements, cost of survey, and of grant deed. The area which may be so purchased may, with the consent of the Commissioner, exceed one-quarter of an acre, but shall not in any case exceed one-half of an acre.

§ 4. Conditional Purchases of Freehold.

1. **General.**—The various methods of obtaining Crown lands by conditional purchase in the several States are given in some detail in preceding issues of the Official Year Book (see No. 22, pp. 141-9).

2. **New South Wales.**—At 30th June, 1947 and 1948 the total number of incomplete conditional purchases in existence was 40,552 and 39,784 respectively, covering an area of 13,218,370 and 12,964,458 acres respectively. The following table gives particulars of conditional purchases, including non-residential conditional purchases and special area conditional purchases, for the years ended 30th June, 1947 and 1948, together with the total area for which deeds have been issued :—

CONDITIONAL PURCHASES : NEW SOUTH WALES.

Year ended 30th June—	Applications Received.(a)	Applications Confirmed.(a)		Areas for which Deeds have been Issued.	
	Number.	Number.	Area.	During the Year.	To end of Year.
			Acres.	Acres.	Acres.
1947	42	15	732	209,650	31,896,353
1948	21	16	2,409	334,796	32,231,148

(a) Excludes conversions from other tenures—1946-47, 639 comprising 150,541 acres; 1947-48, 622 comprising 105,768 acres.

3. **Victoria.**—Excluding selections in the Mallee country, the total area purchased conditionally in 1947 and 1948 was 4,071 and 8,690 acres respectively, all with residence. The number of selectors was 30 and 53 respectively. There were no selections in the Mallee in 1947 and 1948.

In addition, the final payments were made during 1947 and 1948 on conditional purchases comprising 38 and 111 acres of Mallee lands.

4. **Queensland.**—The following selections were made freehold during 1947 and 1948 :—Agricultural farms 158,667 and 65,611 acres; agricultural homesteads 166 and 211 acres; prickly pear selections 63,315 and 121,740 acres; and prickly pear development selections 12,402 and 6,289 acres.

5. **South Australia.**—The land allotted under agreements to purchase during 1947-48 (figures for 1940-47 in parentheses) was 2,654 (13,598) acres, comprising Eyre's Peninsula railway lands 232 (1,039) acres, closer settlement lands 67 (2,309) acres, soldiers' acquired lands 1,589 (78) acres, surplus lands 717 (2,610) acres, and other Crown lands 49 (7,562) acres.

6. **Western Australia.**—During the year ended 30th June, 1948 (figures for the year ended 30th June, 1947 in parentheses) the number of holdings conditionally alienated was 607 (570), the total area involved being 698,079 (556,784) acres, comprising conditional purchases by deferred payments with residence of 692,414 (550,502) acres and free homestead farms 5,665 (6,282) acres. Under the heading "deferred payments with residence" are included conditional purchases of grazing lands.

In addition, Crown grants were issued during 1947-48 (1946-47 in parentheses) for the following selections, the prescribed conditions having been complied with :—Free homestead farms 22,952 (20,319) acres and conditional purchases 204,959 (175,108) acres.

7. **Tasmania.**—During 1947-48 (figures for 1946-47 in parentheses) conditional purchases of 37,340 (26,459) acres were completed. The total area sold conditionally was 2,304 (1,316) acres, comprising selections for purchase 2,099 (1,055) acres, and town and suburban allotments 205 (261) acres. The numbers of applications received and confirmed were 41 (19) and 183 (140) respectively.

§ 5. Leases and Licences under Land Acts.

1. **General.**—Information regarding the methods of obtaining leases and licences of Crown lands in the several States and Territories is given in preceding issues of the Official Year Book (see No. 22, pp. 149-63).

2. New South Wales.—On 30th June, 1948 the area of leases and licences under the control of the Department of Lands, the Water Conservation and Irrigation Commission, and the Western Lands Commission, comprised 112,943,345 acres of Crown lands, compared with 111,864,500 acres at the close of the previous year. Of the total area at 30th June, 1948, 77,316,391 acres were held under the Western Lands Acts, and of the remainder, 24,729,687 acres were held under perpetual lease and 10,897,2q7 acres under other forms of lease, licence and permissive occupancy.

The following table shows the areas held under various descriptions of leases and licences at the end of 1946-47 and 1947-48 :—

AREAS OCCUPIED UNDER LEASE OR LICENCE AT 30th JUNE : NEW SOUTH WALES.(a)
(Acres.)

Particulars.	1947.	1948.
<i>Areas taken up under Crown Lands or Closer Settlement Acts.</i>		
Occupation licences—ordinary	523,353	512,065
preferential	231,228	233,728
Conditional leases	11,812,721	11,733,894
Conditional purchase leases	161,572	157,644
Settlement leases	2,772,362	2,770,819
Improvement leases	32,479	57,141
Annual leases	510,976	467,335
Scrub leases	41,210	51,716
Snow leases	692,675	672,671
Special leases	942,035	936,003
Inferior lands leases	15,460	25,513
Residential leases (on gold and mineral fields)	5,372	5,398
Church and school lands	9	8
Permissive occupancies (ordinary)	2,016,765	2,103,596
(Closer Settlement Acts)	47,256	45,574
Prickly pear leases	158,062	148,068
Crown leases	7,329,046	7,285,895
Homestead farms	4,719,314	4,782,046
Homestead selections and grants	1,669,107	1,667,470
Closer settlement leases (Closer Settlement Acts)	129,562	502,657
Settlement purchase leases (Closer Settlement Acts)	862,343	958,960
Suburban holdings	53,697	53,615
Week-end leases	171	172
Group purchase leases (Closer Settlement Acts)	188,547	206,714
Leases of town lands	67	66
Returned soldiers' special holdings	13,705	13,695
Irrigation areas	231,627	234,521
<i>Leases, Licences and Permissive Occupancies under Western Lands Act.</i>		
Conditional leases	93,823	93,823
Perpetual leases	52,474,589	54,232,448
Other long-term leases	17,380,895	17,040,382
Permissive occupancies	5,459,641	5,600,861
Occupation licences—ordinary	164,025	163,420
preferential	1,130,806	185,427
Total	111,864,500	112,943,345

(a) Excludes mining leases and permits; forest leases and occupation permits; and leases outside irrigation areas, controlled by the Water Conservation and Irrigation Commission—34,616 acres in 1947 and 42,502 acres in 1948.

3. **Victoria.**—The area of Crown lands occupied under leases and licences in each of the years 1947 and 1948 is shown in the following table :—

AREAS OCCUPIED UNDER LEASE OR LICENCE : VICTORIA.
(Acres.)

Particulars.	1947.	1948.
Grazing licences—Other than Mallee	5,533,484	5,703,371
Mallee lands	2,972,274	3,145,878
Auriferous lands (licences)	16,334	16,004
Perpetual leases—Other than Mallee	16,550	16,550
Mallee lands	66,244	63,263
Swamp lands (leases)	4,020	4,020
Agricultural college lands (a)	66,974	48,005
 Total	 8,675,880	 8,997,091

(a) Transferred under Agricultural Colleges Act 1944 to control of Department of Lands and Survey.
See also § 2, para. 2 (iv) *ante*.

4. **Queensland.**—The total area occupied under lease or licence, excluding mining leases, at the end of 1947 and 1948 was as follows :—

AREAS OCCUPIED UNDER LEASE OR LICENCE AT 31st DECEMBER :
QUEENSLAND.
(Acres.)

Particulars.	1947.	1948.
Pastoral leases	243,185,020	243,521,780
Occupation licences	17,498,880	17,001,160
Grazing selections and settlement farm leases ..	83,613,898	84,255,577
Special purpose leases—Crown land	491,427	501,816
Reserves	652,071	853,180
Perpetual lease selections and perpetual lease prickly pear selections	6,392,727	6,434,883
Auction perpetual leases, etc.	30,476	30,582
Forest grazing leases (of reserves)	2,103,800	1,919,200
 Total	 353,968,299	 354,518,178

During 1947 and 1948 the areas taken up were 3,287,329 acres and 7,219,488 acres respectively. The latter area includes 1,904,014 acres of grazing selections which comprised land surrendered and re-opened in connexion with relief to South-Western grazing selectors. Pastoral leases amounted to 1,928,660 acres during 1947 and to 3,100,640 acres during 1948.

5. **South Australia.**—The total area including repurchased lands held under lease or licence, except mining lease and licence, at 30th June, 1947 and 1948, was respectively 135,771,083 acres and 136,809,071 acres, of which pastoral leases, 114,137,403 acres in

1947 and 115,295,542 acres in 1948, constituted the major proportion. The total area leased during 1946-47 was 803,353 acres, and during 1947-48 450,299 acres, pastoral, grazing and cultivation leases constituting 598,315 acres and 292,858 acres thereof.

6. **Western Australia.**—At 30th June, 1947 the total area held under lease or licence issued by the Lands Department amounted to 210,678,819 acres, of which 208,185,283 acres were under pastoral lease. Corresponding figures for 1948 were 214,570,348 acres and 211,877,572 acres. During 1946-47 the total area of leases issued was 5,116,885 acres (pastoral, 4,948,603 acres). Leases issued in 1947-48 totalled 5,217,746 acres (pastoral, 4,913,978 acres).

7. **Tasmania.**—Crown lands leased at 31st December, 1947 for other than mining purposes amounted to 2,715,612 acres, of which 2,062,933 acres were leased for pastoral purposes. At 31st December, 1948 corresponding figures were 2,684,579 acres and 2,026,455 acres. The area of land leased for pastoral purposes during 1946-47 was 67,812 acres and for 1947-48, 104,841 acres.

8. **Northern Territory.**—At 30th June, 1947 the total area held under lease, licence and permit was 154,201,390 acres, of which pastoral leases accounted for 104,497,920 acres and grazing licences 49,703,470 acres. At 30th June, 1948 the total area under lease, etc., was 157,595,520 acres, and pastoral leases and grazing licences, 115,144,320 acres and 40,231,338 acres respectively. Total annual rentals for all leases were £38,496 and £35,929 in 1946-47 and 1947-48 respectively.

9. **Australian Capital Territory.**—The number of leases granted under the City Area Leases Ordinance 1931-1947 to 30th June, 1947 and 1948 (excluding leases surrendered and determined) was 738 and 791 respectively, representing a capital value of £276,767 and £295,072. There were 68 new leases granted during 1946-47 and 80 during 1947-48. The total area held under grazing, etc., lease and licence (including Jervis Bay area) amounted to 304,298 acres in 1947 and 305,094 acres in 1948.

Fourteen leases have been granted under the Church Lands and Special Purposes Ordinances for church and scholastic purposes. In addition, a lease in perpetuity has been granted under the Church of England Land Ordinance 1926 for church purposes.

10. **Summary.**—The following table shows particulars of the land held in each State under lease or licence for purposes other than mining and forestry, the total leased or licensed land in the Territories, and the grand totals, for the years 1944 to 1948:—

AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND FORESTRY.

('000 Acres.)

Year.	N.S.W. (a)	Victoria. (b)	Q'land. (b)	S. Aust. (a)	W. Aust. (a)	Tas. (b)	N.T. (a) (c)	A.C.T. (b) (c) (d)	Total.
1944	111,099	9,463	350,313	132,928	209,916	2,800	156,913	329	973,761
1945	112,225	8,691	354,689	133,401	209,574	2,771	163,497	329	985,177
1946	112,545	10,124	354,325	134,234	209,104	2,741	159,205	329	982,607
1947	111,865	8,676	353,968	135,771	210,679	2,716	154,201	304	978,180
1948	112,943	8,997	354,518	136,809	214,570	2,685	157,596	305	988,423

(a) At 30th June.

(b) At 31st December.

(c) Leases and licences for all purposes

(d) Includes Jervis Bay area.

§ 6. Leases and Licences under Mining Acts.

1. **General.**—Information regarding the various forms of leases and licences under Mining Acts in the several States and the Northern Territory is given in preceding issues of the Official Year Book (*see* No. 22, pp. 170-7).

2. **New South Wales.**—The following table gives particulars of operations on Crown lands for the years 1946-47 and 1947-48:—

AREAS TAKEN UP UNDER MINING ACTS: NEW SOUTH WALES.

(Acres.)

Particulars.	1946-47.		1947-48.	
	Areas Taken up during Year.	Total Areas Occupied at End of Year.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
Gold-mining	951	6,287	1,411	5,425
Mining for other minerals ..	14,811	195,287	22,046	193,888
Authorities to prospect ..	5,148,218	32,493	743,354	1,127,441
Other purposes	427	7,280	830	7,248
Total	5,164,407	241,257	767,641	1,334,002

3. **Victoria.**—The following table gives particulars of the number of leases and licences granted during 1947 and 1948, and the area under occupation for mining purposes at the end of each year:—

AREAS TAKEN UP UNDER MINING ACTS: VICTORIA.

Particulars.	1947.		1948.	
	Leases and Licences Granted.	Total Areas Occupied at End of Year.	Leases and Licences Granted.	Total Areas Occupied at End of Year.
	No.	Acres.	No.	Acres.
Gold-mining leases	75	23,697	41	21,082
Petroleum prospecting licences ..	1	523,446	8	948,665
Coal leases	61	{ (a) 12,995 3,514 }	66	{ (a) 16,023 3,871 }
Other leases and licences ..				
Total	137	563,652	115	989,641

(a) Includes State Coal Mine area 7,575 acres and State Electricity Commission area 2,800 acres.

The area covered by licences, etc., issued in 1947 was 17,278 acres, and in 1948 596,903 acres. The rent, fees, etc., were £7,297 and £8,044 in 1947 and 1948 respectively.

4. **Queensland.**—During 1947 and 1948 the number of miners' rights issued was 3,202 and 2,965 respectively, and of business licences 3 and 2. The following table gives particulars of the areas of lands taken up under lease or licence and the total areas occupied for 1947 and 1948. In addition, an area estimated at 25,000 acres was held under miners' rights and dredging claims.

AREAS TAKEN UP UNDER MINING ACTS : QUEENSLAND.

(Acres.)

Particulars.	1947.		1948.	
	Areas Taken up during Year.	Total Areas Occupied at End of Year.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
Gold-mining	947	3,301	434	3,365
Mining for other minerals	2,659	27,782	7,005	32,287
Miners' homestead leases	6,964	420,926	1,010	421,027
Petroleum-prospecting permits	127,680	536,180	..	482,740
Coal prospecting areas	2,698	3,509	5,550	5,550
Total	140,948	991,698	13,999	944,969

The area of land held under lease only at 31st December, 1947 and 1948 was 452,009 and 456,679 acres respectively.

5. South Australia.—The following table gives particulars of operations for 1946-47 and 1947-48 :—

AREAS TAKEN UP UNDER MINING ACTS : SOUTH AUSTRALIA.

(Acres.)

Particulars.	1946-47.		1947-48.	
	Areas Taken up during Year.	Total Areas Occupied at End of Year.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
Gold-mining leases	309	691	286	963
Mineral and miscellaneous leases	1,318	70,058	1,603	70,046
Claims	4,539	15,018	3,986	11,830
Occupation licences	2	31	2	32
Oil licences	31,360,000	35,936,000	32,000	35,968,000
Special mining leases	50,880	26,880	..	26,880
Search licences	640	640	..	..
Total	31,417,688	36,049,318	37,877	36,077,751

6. Western Australia.—The following table gives particulars of operations for 1947 and 1948. The figures exclude holdings under miners' rights and mineral oil licences. Of the areas shown as taken up in 1948 (1947 in parentheses), the area under lease was 4,110 (4,076) acres for gold-mining, 705 (2,150) for mining for other minerals, 768 (94) for miners' homesteads, and 128 (21) for miscellaneous—a total of 5,711 (6,341) acres. The balance was taken up under licences.

AREAS TAKEN UP UNDER MINING ACTS : WESTERN AUSTRALIA.

(Acres.)

Particulars.	1947.		1948.	
	Areas Taken up during Year.	Total Areas Occupied at End of Year.	Areas Taken up during Year.	Total Areas Occupied at End of Year.
Gold-mining	22,046	38,687	17,583	35,190
Mining for other minerals	11,772	49,611	21,898	58,240
Other purposes	188	37,734	2,490	36,643
Total	34,006	126,032	41,971	130,073

7. Tasmania.—During 1948 (figures for 1947 in parentheses) the number of leases issued was 32 (72) of which 14 (21) were for tin-mining covering 209 (907) acres. The following table shows acreages for 1947 and 1948.

AREAS TAKEN UP UNDER MINING ACTS : TASMANIA.

(Acres.)

Particulars.	1947.		1948.	
	Leases Issued during Year.	Total Areas Occupied at End of Year.	Leases Issued during Year.	Total Areas Occupied at End of Year.
Gold-mining	72	953	..	464
Mining for other minerals	1,946	14,441	608	12,805
Licences to search for coal or oil .. .. .	..	..	200	200
Mining for coal .. .. .	..	7,477	..	4,585
Other purposes	724	2,829	133	4,627
Total	2,742	25,700	941	22,681

8. Northern Territory.—At 30th June, 1948 the number and acreage of holdings under mining lease and tenement were as follows :—

MINING LEASES AND TENEMENTS : NORTHERN TERRITORY, 30th JUNE, 1948.

Particulars.	No.	Acres.
Gold-mining leases	276	4,701
Mineral leases	198	4,898
Mineral reward leases	2	120
Tin dredging claims	1	300
Mineral prospecting areas	36	644
Gold prospecting areas	20	312
Business and residence areas	197	54
Miscellaneous	66	334
Total	790	11,363

At 30th June, 1947 leases and mining tenements in force numbered 787, with an aggregate area of 11,725 acres.

9. **Summary.**—The following table shows the areas taken up, or for which leases and licences for mining purposes were issued during the year, and the total areas occupied, for the years 1944 to 1948 :—

AREAS TAKEN UP UNDER MINING ACTS.

(Acres.)

Year.	N.S.W. (a)	Victoria.	Q'land. (b)	S. Aust. (a) (b)	W. Aust. (c)	Tasmania. (b)	Total. (d)
1944 ..	(e)	1,755	16,393	2,489	17,202	2,749	(e)
1945 ..	(e)	1,554	73,086	2,567,411	12,388	2,918	(e)
1946 ..	51,797	3,155	15,589	4,591,044	27,554	1,702	4,690,841
1947 ..	5,164,407	17,278	140,948	31,417,688	34,006	2,742	36,777,069
1948 ..	767,641	596,903	13,999	37,877	41,971	941	1,459,332

AREAS TAKEN UP OR FOR WHICH LEASES AND LICENCES ISSUED DURING YEAR.

Year.	N.S.W. (a)	Victoria.	Q'land. (b)	S. Aust. (a) (b)	W. Aust. (c)	Tasmania. (b)	Total. (d)
1944 ..	(e)	647,255	798,916	67,195	107,150	29,992	(e)
1945 ..	(e)	648,046	860,565	2,629,739	116,280	23,917	(e)
1946 ..	2,417,462	645,858	858,811	4,661,737	130,393	24,080	8,738,341
1947 ..	241,257	563,652	991,698	36,049,318	126,032	25,700	37,997,657
1948 ..	1,334,002	989,641	944,969	36,077,751	130,073	22,681	39,499,117

TOTAL AREAS OCCUPIED AT END OF YEAR.

(a) Year ended 30th June. (b) Excludes lands held under miners' rights only. (c) Excludes holdings under miners' rights and mineral oil licences. (d) Excludes Northern Territory. (e) Not available.

§ 7. Closer Settlement.

1. **General.**—Particulars regarding the methods of acquisition and disposal of land for closer settlement in the several States are given in preceding issues of the Official Year Book (*see* No. 22, pp. 163-9).

2. **New South Wales.**—Since the inception of closer settlement in 1905 to 30th June, 1948, 1,983 estates totalling 5,150,517 acres have been purchased by the Crown at a cost of £20,146,135 for purposes of closer settlement of civilians and returned service personnel. The total areas set apart, and the values thereof, to 30th June, 1947 and 1948, are shown below :—

CLOSER SETTLEMENT AREAS (a) : NEW SOUTH WALES.

Areas (Acres).			Values (£).			
To 30th June—	Acquired Lands.	Adjoining Crown Lands.	Total.	Cost of Acquired Lands.	Value of Adjoining Crown Lands.	Total.
1947.. ..	4,593,083	209,661	4,802,744	17,098,094	370,874	17,468,968
1948.. ..	5,150,517	213,355	5,363,872	20,146,135	385,284	20,531,419

(a) Includes 70 long-term leases resumed for closer settlement, but excludes areas acquired for village sites, 3,665 acres.

The following table gives particulars regarding the disposal of the farms by closer settlement purchase and closer settlement lease at 30th June, 1947 and 1948 :—

CLOSER SETTLEMENT ALLOTMENTS : NEW SOUTH WALES.

At 30th June—	Farms Allotted to Date.			Total Amount received in respect of Closer Settlement Farms.
	Number.	Area.	Capital Value.	
		Acres.	£	£
1947	9,448	4,593,083	17,098,094	16,393,118
1948	9,943	5,150,517	20,146,135	17,131,820

3. **Victoria.**—The Closer Settlement Commission was abolished as from 31st December, 1938, and land settlement was placed under the control of the Department of Lands and Survey. On 31st March, 1939 all Closer Settlement and Discharged Soldiers' accounts were amalgamated, the settlers' accounts adjusted and the new debt made payable over an extended period. As separate details are not available now, the following statement shows the operations under the provisions of the Closer Settlement Acts to 30th June, 1938 :—

CLOSER SETTLEMENT : VICTORIA.

(INCLUDING IRRIGATED AREAS.)

To 30th June—	How Made Available for Settlement.										Area Available for Settlement at 30th June.
	Total Area Acquired.	Total Cost of Purchases. (a)	Farm Allotments.	Workmen's Homes Allotments.	Agricultural Labourers' Allotments.	Town Allotments. (b)	Roads and Reserves.	Number of Farms, etc.	Total Receipts (Land and Advances).	Repayments of Principal (Land and Advances).	
	Acres.	£	Acres.	Acres.	Acres.	Acres.	Acres.	No.	£	£	Acres.
1938	1,402,568	10,244,023	1,162,676	790	3,484	86,599	14,775	8,722	14,297,492	4,779,268	1,006

(a) Includes value of Crown Lands taken over. Conditional Purchase Lease.

(b) Includes all land sold other than under

In the foregoing table the area and cost of land acquired for closer settlement purposes include, in addition to 133,128 acres purchased for £1,246,722 and transferred subsequently to discharged soldiers, a total area of 512,757 acres costing £4,125,822 which was purchased originally for the settlement of discharged soldiers.

4. **Queensland.**—Separate records relating to the closer settlement of re-purchased land are no longer kept by the Land Administration Board, and the operations under this heading are now included with "Leases and Licences under Land Acts." The total area acquired to 31st December, 1934 was 970,778 acres, costing £2,292,881. At the same date the area allotted amounted to 915,690 acres distributed over 3,048 selections consisting of 2,155 agricultural farms, 257 unconditional selections, 544 perpetual lease selections, 9 prickly pear selections, 6 perpetual lease prickly pear selections and 77 settlement farm leases. An area of 13,038 acres was sold by auction.

5. **South Australia.**—The following table shows the area of land acquired for the purposes of closer settlement, and the manner in which it had been dealt with to 30th June, 1947 and 1948 :—

CLOSER SETTLEMENT : SOUTH AUSTRALIA.

(Acres.)

To 30th June—	Area of Lands Re- purchased (excluding land afterwards set apart for other purposes).	Agree- ments with Covenants to Purchase.	Total Area Leased as Homestead Blocks.		Perpetual Leases.	Mis- cellaneous Leases.	Sold.	Remainder Un- occupied (including roads and land in course of allotment).
			Right of Purchase.	Perpetual Lease.				
1947 ..	839,461	342,012	..	1,353	125,528	20,881	337,019	12,668
1948 ..	840,918	321,059	..	1,293	124,068	14,845	390,861	18,102

The total area re-purchased at 30th June, 1948 was 922,568 acres at a cost of £2,835,437. Included in these figures are 51,872 acres purchased for £185,285 and afterwards set apart for returned service personnel, 3,214 acres reserved for forest and waterworks purposes, the purchase-money being £16,185, and also 26,563 acres of swamp and other lands which were purchased for £111,580 in connexion with reclamation of swamp-lands on the River Murray. Of the total area, 826,793 acres in 1947 and 822,726 in 1948 have been allotted to 2,809 and 2,818 persons respectively, the average area to each being 294 and 292 acres.

6. **Western Australia.**—The total area acquired for closer settlement up to 30th June, 1948 was 1,654,117 acres, costing £2,882,626. Of this area, 20,972 acres have been set aside for roads, reserves, etc., leaving a balance of 1,633,145 acres available for selection. Particulars of operations under the Act for the year ended 30th June, 1948 (figures for year ended 30th June, 1947 in parentheses) are as follows :—Area selected during the year 75,171 (3,738) acres; number of farms, etc., allotted to date 1,768 (1,700); total area occupied to date 867,235 (792,064) acres; balance available for selection 765,910 (451,526) acres; and total revenue £1,284,726 (£1,228,736).

7. **Tasmania.**—Up to 30th June, 1948, 37 areas had been opened up for closer settlement, the total purchase-money paid by the Government being £369,578 and the total area acquired amounting to 104,193 acres, including 12,053 acres of Crown lands. The number of farms occupied at 30th June, 1947 and 1948 was 185 and 182 respectively.

8. **Summary.**—Because of the amalgamation, in some States, of closer settlement records with those of other bodies it is not possible to obtain up-to-date figures of the total area in Australia acquired and set aside for closer settlement purposes, and of the cost thereof. The following figures are aggregations of the State totals as at the latest dates available, and should be regarded as approximations intended only to give some idea of the extent of the scheme :—Area acquired and set aside, 10,400,000 acres; cost thereof, £38,750,000.

§ 8. Settlement of Returned Soldiers and Sailors : 1914-18 War.

1. **General.**—Information regarding the methods adopted in each State following the commencement of the 1914-18 War for providing land for the settlement of returned soldiers and sailors, together with the conditions under which such land could be acquired

is given in earlier issues of the Official Year Book (*see* No. 13, pp. 1016-23, and No. 18, pp. 187-9). Later modifications were made with a view to simplifying procedure and liberalizing the conditions under which holdings may be acquired.

Particulars respecting the position of soldier settlement in each State at the latest available date are given in the following paragraphs.

2. **New South Wales.**—At 30th June, 1948 (figures at 30th June, 1947 in parentheses) the area set apart for soldiers of the 1914-18 War was 5,379,279 (5,379,279) acres, of which 1,710,272 (1,710,272) acres comprised acquired land purchased at a cost of £8,113,956 (£8,113,956). The number of settlers to whom farms, etc., had been allotted up to 30th June, 1948 was 9,882 (9,846). Five thousand, four hundred and sixty-eight (5,414) soldiers have either transferred or abandoned their farms, leaving 4,414 (4,432) in occupation of 5,648,358 (6,336,216) acres, consisting of 4,461,366 (5,023,689) acres of Crown lands, including 2,147,250 (2,716,300) acres in the Western Division taken up under the Western Lands Act, 2,241,583 (2,242,834) acres miscellaneous holdings, and 72,533 (64,555) acres within Irrigation Areas. The area of acquired lands still occupied is 1,186,992 (1,201,952) acres. These totals exclude 703 (703) discharged soldiers who purchased privately-owned land with their own capital and were granted advances for the purchase of stock and plant or for effecting improvements.

3. **Victoria.**—At 30th June, 1938 the area acquired or set apart for soldier settlement in respect of the 1914-18 War was 2,482,286 acres consisting of 1,763,241 acres of private land purchased at a cost of £13,361,266, 133,128 acres costing £1,246,722 taken over from Closer Settlement, and 585,917 acres of Crown lands valued at £447,622. Subsequently 512,757 acres valued at £4,125,822 were transferred to Closer Settlement. Up to 30th June, 1938 the number of settlers to whom farms, etc., had been allotted was 12,126, and the number of farms, etc., allotted was 9,784 (including 955 farms originally purchased for closer settlement purposes) containing 2,365,518 acres. In addition, 802 share farmers and holders of leasing agreements and private land had received assistance. The number of farms, etc., occupied at 30th June, 1938 was 8,426 (including 1,001 originally purchased for closer settlement) containing 1,734,379 acres. Later particulars cannot be given, as separate details are not available.

4. **Queensland.**—At 30th June, 1929 the area acquired or set apart for soldier settlement (1914-18 War) was 577,633 acres, of which 41,101 acres comprised private land, purchased at a cost of £270,480. The number of farms occupied was 1,148, containing 440,992 acres. Some of these selections were acquired under the ordinary provisions of the Land Act, and do not include areas specially set apart for soldiers.

As special records are not now kept respecting the areas held by discharged soldier settlers later information cannot be given.

5. **South Australia.**—At 30th June, 1947 and 1948 the area of land acquired or set apart for soldier settlement (1914-18 War) was 1,336,612 acres, of which 1,202,653 acres comprised private land purchased at a cost of £3,863,572. These figures exclude mortgages discharged, £194,770 on 360,403 acres representing 300 farms, etc., and 314 settlers. The number of soldiers to whom assistance had been granted under the Discharged Soldiers' Settlement Acts up to 30th June, 1948 was 4,165, and the area of farms, etc. (including mortgages discharged) on which assistance had been granted was 2,746,744 acres. At 30th June, 1948 (1947) farms, etc., occupied numbered 1,283 (1,357) containing 826,379 (898,371) acres.

6. **Western Australia.**—At 30th June, 1947 the area of private land acquired for soldier settlement (1914-18 War) was 345,110 acres purchased at a cost of £605,076. To that date, assistance had been given to 5,213 returned soldiers, and the number of farms, etc., occupied was 1,145. No further land has been purchased for returned soldiers of the 1914-18 War.

Owing to the amalgamation of records in the Rural and Industries Bank, information regarding assistance to returned soldiers is no longer available, but at 30th June, 1944 the area of land acquired or set apart for soldier settlement was 14,287,643 acres.

7. *Tasmania*.—At 30th June, 1948 (figures at 30th June, 1947 in parentheses) the area acquired or set apart for soldier settlement (1914–18 War) was 364,200 (364,200) acres, of which 277,348 (276,844) acres comprised private land purchased at a cost of £2,100,040 (£2,093,189). Up to 30th June, 1948 (figures to 30th June, 1947 in parentheses) the number of settlers to whom farms, etc., had been allotted was 2,380 (2,380) and the number of farms, etc., allotted was 2,204 (2,204) containing 343,557 (343,557) acres. The number of farms, etc., occupied at 30th June, 1948 was 795 containing 137,111 acres compared with 917 containing 166,768 acres at 30th June, 1947.

8. *Summary*.—As with closer settlement, it is not possible to give up-to-date figures of soldier settlement (1914–18 War) for Australia as a whole. The following figures are aggregations of State totals as at the latest dates available:—Total areas acquired and set aside, 24,400,000 acres, including 5,300,000 acres of private land acquired at a cost of £28,300,000.

9. *Losses on Soldier Settlements*.—(i) *General*. At the Premiers' Conference in Melbourne in 1917, it was agreed that the States should undertake the work of settling on the land returned soldiers and munition and war workers, and that the Commonwealth should raise the necessary loans for the States for this purpose.

The original arrangement provided that the Commonwealth should take the responsibility of finding up to £500 per settler as working capital for improvements, implements, seed, etc., an amount which was subsequently increased to £625, together with £375 per settler for resumptions and works incidental to land settlement approved by the Commonwealth. Loans were to be advanced to the settlers by the States at reasonable rates of interest not exceeding $3\frac{1}{2}$ per cent. in the first year, increasing by $\frac{1}{2}$ per cent. each subsequent year to the full rate of interest at which the money had been raised, plus working expenses, the difference between these rates and the cost of the money to the Government to be borne equally by the Commonwealth Government and the State Government. This provision respecting interest loss was not ultimately carried out as passed, the Commonwealth Government assuming responsibility for more than one-half of the interest loss, namely, a rebate of interest equal to $2\frac{1}{2}$ per cent. per annum during a period of five years from the date of payment to the State of each instalment of loan money.

(ii) *Report by Mr. Justice Pike*. In addition to this expected loss of interest, other losses occurred in connexion with soldier settlement, and in 1927 Mr. Justice Pike, of the Land Valuation Court of New South Wales, was commissioned to report, not only on the losses, but on the principles on which financial responsibility should be divided. His report in 1929, to which reference should be made for fuller information, found that in all the negotiations concerning soldier settlement on the land the States insisted on undivided control, and that financial responsibility went along with control except so far as the Commonwealth definitely promised to give assistance. The undertaking of the Commonwealth to share equally with the States the cost of lower interest rates to soldier settlers was made the basis of a practical compromise, and the report recommended that the total loss should be shared equally between the two parties.

The gross losses were assessed at £23,525,522 distributed amongst the States as follows:—New South Wales, £7,003,950; Victoria, £7,721,891; Queensland, £1,853,315; South Australia, £3,565,829; Western Australia, £2,059,368; and Tasmania, £1,321,169. Other concessions granted by the Commonwealth Government increased its proportion of these gross losses (£11,762,760) to £12,333,000.

The total amount advanced by the Commonwealth to the States was £35,000,000. For further information on this subject see Official Year Book No. 28, pp. 131–2, and earlier issues.

§ 9. Settlement of Returned Service Personnel : 1939-45 War.

1. War Service Land Settlement Scheme.—(i) *General.* Information regarding the method of operation and the administration of the War Service Land Settlement Scheme (the agreement between the Commonwealth and States for the settlement of returned soldier personnel on the land) will be found in preceding issues of the Official Year Book (*see* No. 37, pp. 113-117).

While the scheme is concentrated mainly on the expansion of the wool, fat lamb, wheat, dairying, citrus and dried fruit industries throughout Australia, other important industries have not been overlooked. The Commonwealth Government, under this scheme, is giving practical assistance and encouragement to the establishment of tobacco growing, particularly in the States of Queensland and Western Australia.

Before ex-servicemen are allotted tobacco farms, a course of training extending over a period of twelve months is provided under the Commonwealth Rural Training Scheme. This course, carried out mainly in the field, starts from the raising of seedlings and finishes with the grading of the crop. Tobacco-growing projects in Queensland and Western Australia which have been approved to date will, it is anticipated, result in an annual yield of nearly 1,000,000 lb. of tobacco leaf.

The sugar industry is now also included under the scheme, the Central Sugar Cane Prices Board having granted an assignment of land in Queensland for the growing of sugar-cane by ex-servicemen.

(ii) *Summary of Operations to 31st December, 1948.* Up to 31st December, 1948 the States had submitted to the Commonwealth settlement proposals involving 8,313,511 acres, and of that total 6,588,038 acres had been approved as suitable for soldier settlement.

The tables hereunder show the position up to 31st December, 1948.

WAR SERVICE LAND SETTLEMENT (1939-45 WAR) : SUMMARY TO 31st DECEMBER, 1948.

State.	Land Submitted by States.		Land Approved by Commonwealth.					
			As Suitable for Soldier Settlement.		For Acquisition.		Acquired by States.	
	Sub- missions.	Area.	Pro- perties.	Area.	Pro- perties.	Area.	Pro- perties.	Area.
	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.
New South Wales—								
Subdivision ..	70	1,039,426	62	844,058	62	844,058	38	536,699
Irrigation Lands ..	20	220,014	19	206,534	19	206,534	6	113,311
Western Division ..	96	3,385,320	86	2,640,259	86	2,640,259	86	2,640,259
Promotion Scheme ..	247	763,507	173	638,540	173	638,540	87	414,731
Irrigation Lands ..	28	57,808	27	56,205	27	56,205	16	35,975
Total, New South Wales ..	461	5,466,075	367	4,385,596	367	4,385,596	233	3,740,975
Victoria—								
Irrigation Lands ..	10	152,638	10	107,638	10	107,638	9	17,324
Other ..	83	464,253	79	440,406	79	440,406	68	389,019
Total, Victoria ..	93	616,891	89	548,044	89	548,044	77	406,343
Queensland ..	125	228,654	108	191,773	108	191,773	33	90,246
South Australia ..	118	454,530	101	362,719	99	361,864	82	322,021
Western Australia ..	504	1,361,437	330	942,847	313	917,171	291	818,293
Tasmania ..	(a) 27	185,924	(a) 21	157,059	(a) 14	144,772	(a) 10	93,892
Total, Australia ..	1,328	8,313,511	1,016	6,588,038	990	6,549,220	726	5,471,770

(a) Excludes portion of one property.

WAR SERVICE LAND SETTLEMENT (1939-45 WAR): SUMMARY TO
31st DECEMBER, 1948—*continued.*

State.	Land Approved by Commonwealth for Subdivision.			Single Properties Approved by Commonwealth.		Land Allotted to Settlers.		Land Under Considera- tion, Rejected or Withdrawn.
	Pro- perties.	Area.	Hold- ings.	Area.	Pro- perties.	Area.	Hold- ings.	Area.
	No.	Acres.	No.	Acres.	No.	Acres.	No.	Acres.
New South Wales—								
Subdivision ..	51	673,172	574	..	..	464,352	384	195,368
Irrigation Lands ..	15	161,661	188	..	..	45,239	68	13,480
Western Division ..	..	..	..	2,377,459	79	2,377,459	79	745,061
Promotion Scheme ..	113	560,379	394	69,763	58	438,866	350	124,967
Irrigation Lands ..	20	52,184	85	4,021	7	11,909	20	1,603
Total, New South Wales ..	199	1,447,396	1,241	2,451,243	144	3,337,825	901	1,080,479
Victoria—								
Irrigation Lands ..	5	33,017	368	2,336	5	21,868	247	45,000
Other ..	70	349,242	603	3,019	5	327,715	554	23,847
Total, Victoria ..	75	382,259	971	5,355	10	349,583	801	68,847
Queensland ..	52	128,393	214	8,807	16	80,973	104	36,881
South Australia ..	(a) 44	113,339	289	6,032	12	19,444	99	91,811
Western Australia ..	84	460,682	223	314,118	205	348,587	208	418,590
Tasmania ..	(a) 8	69,221	82	157	1	..	..	28,865
Total, Australia ..	462	2,601,290	3,020	2,785,712	388	4,136,412	2,113	1,725,473

(a) Excludes portion of one property.

The area approved in New South Wales as suitable for settlement to 31st December, 1948 was 4,385,596 acres. Plans had been approved for the subdivision of 199 properties into 1,241 holdings. In addition, approval had been given to include 144 single farm properties, making a total of 1,385 holdings, with an area of 3,898,639 acres. The number of holdings allotted to settlers was 901, involving 3,337,825 acres. In Victoria the area approved for soldier settlement to 31st December, 1948 was 548,044 acres. By the subdivision of 75 properties and the inclusion of 10 single farm holdings, a total of 981 holdings with an area of 387,614 acres had been provided. In Queensland 191,773 acres had been provided for soldier settlement to 31st December, 1948. This included 20,323 acres approved for sugar production and 17,375 acres to be used in the establishment of tobacco farms. Sixteen single farm holdings and the subdivision of 52 properties into 214 holdings provided 230 holdings with an area of 137,200 acres. The area submitted for soldier settlement by South Australia was 454,530 acres and 362,719 acres had been approved by the Commonwealth. To 31st December, 1948 an area of 119,371 acres had been subdivided into 301 holdings, and 99 holdings, with an area of 19,444 acres, had been allotted to settlers. Of the total holdings provided, 104 were in the Loxton, Chaffey and Loveday Irrigation areas. Western Australia had submitted 504 proposals for soldier settlement involving 1,361,437 acres, and 942,847 acres had been approved. To 31st December, 1948 there had been 460,682 acres subdivided into 223 holdings and 205 existing single farms with a total area of 314,118 acres had been approved as suitable. There had been 208 holdings with an area of 348,587 acres allotted to ex-soldier applicants. The production of tobacco leaf in Western Australia is to be expanded under the War Service Land Settlement Scheme. There had

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been 157,059 acres approved for soldier settlement in Tasmania and on King and Flinders Islands. Considerable developmental work is in progress and to 31st December, 1948 83 holdings, comprising 69,378 acres, had been provided. Fourteen of the holdings provided will be subject to an irrigation scheme on the Lawrenny Estate. Settlers will be engaged chiefly in dairying and sheep breeding for wool and fat lambs.

(iii) *Expenditure.* The following table shows a dissection of the Commonwealth expenditure on War Service Land Settlement to 31st December, 1948 :—

WAR SERVICE LAND SETTLEMENT (1939-45 WAR): EXPENDITURE TO 31st DECEMBER, 1948.

(£.)

Advances to States.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Total.
For acquisition of land .. ..	..	..	..	1,132,655	2,121,117	351,750	3,605,522
For development and improvement of land .. ..	..	..	..	950,790	571,701	269,292	1,791,783
For payment of living allowances to settlers	127,403	..	9,000	4,384	46,500	..	187,287
To provide credit facilities to settlers .. ..	..	..	..	36,805	437,700	..	474,505
Remission of Interest	1,632	..	..	..	..	..	1,632
Valuations, Commonwealth Contributions .. ..	..	..	5,747	..	..	..	5,747
Remission of Rent	10,535	..	..	..	..	..	10,535
Total	139,570	..	14,747	2,124,634	3,177,018	621,042	6,077,011

2. *Loans and Allowances (Agricultural Occupations) Scheme.*—Full details of the measures taken to provide for the re-establishment of ex-servicemen in rural occupations are contained in Official Year Book No. 37, pp. 117-8.

Ex-servicemen are taking advantage of this means of re-establishing themselves and to the 31st December, 1948 the number of loan applications approved by State authorities for the Commonwealth was 10,988 for an amount of £7,890,164. The amount actually advanced to applicants to 31st December, 1948 was £5,819,953. The following table shows particulars for each State to 31st December, 1948 :—

LOANS (AGRICULTURAL OCCUPATIONS): SUMMARY TO 31st DECEMBER, 1948.

State.	Applications.			Loans Approved.		Advanced by Commonwealth Treasury to States.	Advanced by States to Applicants.
	Re-ceived.	Ap-proved.	Refused, With-drawn or Not Yet Approved.	Gross Amount.	Net Approvals.(a)		
					Applica-tions.	Amount.	
				£		£	£
New South Wales	5,595	4,606	989	3,413,114	4,085	2,995,756	2,537,003
Victoria ..	3,545	2,302	1,243	1,465,655	2,143	1,363,738	1,083,187
Queensland ..	1,438	1,120	318	612,507	937	507,989	385,000
South Australia ..	1,465	841	624	625,314	794	596,148	410,000
Western Australia	2,460	1,691	769	1,507,599	1,600	1,425,503	975,000
Tasmania ..	760	426	334	263,975	405	251,279	175,000
Northern Territory	11	2	9	2,000	2	2,000	2,000
Total ..	15,274	10,988	4,286	7,890,164	9,966	7,142,413	5,819,953

(a) After deduction of loans declined after approval—£747,751.

To the 31st December, 1948 there had been 10,386 allowance applications approved and the amount paid was £1,568,250. The following table gives State details to 31st December, 1948:—

ALLOWANCES (AGRICULTURAL OCCUPATIONS) : SUMMARY TO 31st DECEMBER, 1948.

State.	Applications.			Advanced by Common- wealth Treasury to Bank.	Allowances Paid.
	Received.	Approved.	Rejected, Withdrawn or Not Yet Approved.		
				£	£
New South Wales ..	3,376	3,032	344	460,000	448,135
Victoria ..	2,443	1,850	593	240,000	212,186
Queensland ..	2,237	1,849	388	313,500	307,960
South Australia ..	1,715	1,293	422	232,000	215,673
Western Australia ..	2,399	2,062	337	359,000	335,896
Tasmania ..	384	300	84	53,000	48,400
Total ..	12,554	10,386	2,168	1,657,500	1,568,250

3. War Service Land Settlement Division—Total Expenditure.—The following table shows details, by States, of the total expenditure of the War Service Land Settlement Division for the years 1945-46 to 1947-48, the six months to 31st December, 1948, and the aggregate to 31st December, 1948. The aggregate, £13,903,033, includes—War service land settlement, £6,077,011; agricultural loans, £5,157,000; agricultural allowances, £1,657,500; administrative expenses, £230,397; rural training, £781,125. Details of the larger items are given in the tables concerning them.

WAR SERVICE LAND SETTLEMENT DIVISION : EXPENDITURE.
(£.)

Period.	New South Wales.	Victoria.	Queens- land.	South Australia.	Western Australia.	Tas- mania.	Northern Territory.	Total.
1945-46 ..	120,500	153,804	60,000	263,299	610,042	331,769	..	1,539,414
1946-47 ..	1,289,426	536,230	261,780	1,285,495	1,337,384	140,506	2,000	4,852,821
1947-48 ..	1,191,480	618,637	324,000	887,712	1,769,701	294,936	..	5,086,466
1948-49 (six months) ..	448,586	298,205	213,591	434,265	915,039	153,146	..	2,424,332
Total to 31st December, 1948 ..	3,049,992	1,606,876	859,371	3,870,771	4,632,166	920,357	2,000	13,903,033

§ 10. Advances to Settlers.

1. General.—A detailed statement regarding the terms and conditions governing advances to settlers in the several States and the Northern Territory appears in preceding issues of the Official Year Book (*see* No. 22, pp. 179-186).

In this section are summarized the loans and advances made by the various Government lending agencies in the States, including the transactions in lands acquired under closer and soldier settlement schemes. The balances owing on former Crown lands sold on the conditional purchase, etc., system, however, are not included.

The amounts outstanding do not represent the actual differences between the total advances and settlers' repayments, for considerable remissions of indebtedness have been made in all States as a result of reappraisements of land values and the writing down of debts.

2. New South Wales.—The following table gives particulars respecting advances, etc., under State Authorities to 30th June, 1948 :—

ADVANCES TO SETTLERS : NEW SOUTH WALES.

Advances.	Advances made during—		Total Advances at 30th June, 1948.	Amount outstanding at 30th June, 1948.	
	1946-47.	1947-48.		Number of Accounts.	£
Department of Lands—	£	£	£		
Closer Land Settlement .. ..	..	..	15,113,154	7,200	(a) 4,693,466
Soldier Settlers, 1914-18 War ..	..	..	(b) 3,196,005	1,045	450,400
1939-45 War	14,638	382,304	396,942	308	389,347
Soldier Land Settlement	1,245,882	2,821,863	4,316,229	335	(c) 2,050,095
Wire Netting .. ..	..	..	1,494,653	1,542	164,021
Prickly Pear	5,835	7,782	172,830	322	5,288
Rural Bank—					
General and Rural Bank Divisions ..	4,146,021	4,161,002	48,786,987	14,391	17,034,888
Government Agency Department—					
Rural Industries	141,573	89,659	7,655,274	1,322	657,706
Unemployment Relief and Dairy Promotion	28,325	25,065	1,488,283	1,823	284,193
Rural Reconstruction (d)	993,258	933,978	10,391,165	3,030	4,700,120
Shallow Boring	16,031	17,915	938,339	547	169,455
Farm Water Supplies	1,678	12,448	14,126	56	12,681
Irrigation Areas	35,084	48,768	(e)	(e)	1,304,208
Government Guarantee Agency ..	25,666	19,268	170,127	17	8,658
Closer Settlement Agency .. ..	..	..	166,826	116	151,419
Total	6,653,991	8,520,052	794,300,940	(f) 32,054	32,075,945

(a) Excludes an amount of £4,090,848 to 30th June, 1948, capitalized on conversion into leasehold under the Closer Settlement Amendment (Conversion) Act 1943. (b) In addition, the sum of £1,925,084 has been expended on developmental works on soldiers' settlements. (c) Includes capital value of Closer Settlement Leases, £1,867,042, and unpaid balance and interest on structural improvements, £183,053. (d) Includes Debt Adjustment, Drought Relief, and Marginal Wheat Areas Scheme Advances (Commonwealth and State Moneys), amount outstanding £3,451,203. (e) Not available. (f) Incomplete.

3. Victoria.—The following table gives particulars respecting advances, etc., under State Authorities to 30th June, 1948 :—

ADVANCES TO SETTLERS : VICTORIA.

Advances.	Advances made during—		Total Advances at 30th June, 1948.	Amount outstanding at 30th June, 1948.	
	1946-47.	1947-48.		Number of Persons.	£
State Savings Bank, Credit Foncier—	£	£	£		
Civilians	93,609	99,257	11,403,329	2,092	1,890,013
Discharged Soldiers	479	182	847,608	158	111,534
Treasurer—					
Cool Stores, Canneries, etc. ..	17,500	78,000	937,783	(a) 7	255,212
Department of Lands and Survey—					
Closer Settlement Settlers and Soldier Settlers .. ..	..	..	646,904,855	5,800	7,143,321
Cultivators of Land	8,539	33,238	2,449,800	585	126,406
Wire Netting .. ..	..	16,004	591,541	899	93,127
Soldier Settlement Commission—					
Advances for sales of land not required for Soldier Settlement ..	..	2,094	2,094	4	1,570
Single Unit Farms	319,173	2,537,814	2,856,987	842	2,848,389
Improvements, stock, implements, etc.	3,000	3,450	6,450	4	4,483
Re-establishment and Employment Act 1945	392,711	478,310	879,421	1,437	769,972
Total	835,011	3,248,349	66,879,868	11,828	13,244,027

(a) Companies and Co-operative Societies.
30, Act 4091).

(b) Represents consolidated debts of settlers (Section

4. Queensland.—The following table gives particulars of advances to 30th June, 1948. The figures exclude transactions in land.

ADVANCES TO SETTLERS : QUEENSLAND.

Advances.	Advances made during—		Total Advances at 30th June, 1948.	Amount outstanding at 30th June, 1948.	
	1946-47.	1947-48.		Number of Persons.	£
	£	£	£		
Co-ordination of Rural Advances and Agricultural Bank Acts ..	1,087,599	956,266	11,776,709	3,301	2,916,963
Discharged Soldiers' Settlement (a) ..	1,153	367	2,469,950	611	150,941
Water Facilities ..	..	..	5,079	80	5,590
Wire Netting, etc. ..	..	..	1,019,103	1,412	168,553
Seed Wheat and Barley ..	1,563	4,883	(b) 133,358	(c)	13,140
Drought Relief ..	366,479	11,227	699,369	(c)	375,653
War Service Land Settlement ..	..	54,076	54,076	26	53,395
Income (Unemployment Relief and State Development) Tax Acts (d) ..	70	32	1,184,475	1,455	248,626
Irrigation ..	..	..	54,914	53	13,480
Farmers' Assistance (Debt Adjustment Acts) ..	37,194	11,877	988,585	283	488,597
Re-establishment and Employment Act 1945 ..	118,092	181,439	303,869	533	279,756
Total	1,612,150	1,220,167	18,742,793	(e) 7,754	4,714,694

(a) Includes advances to group settlers through the Lands Department, as well as advances through the Agricultural Bank. (b) Includes accrued interest. (c) Not available. (d) Largely for relief to cotton and tobacco growers and for rural development (ringbarking, clearing, fencing, etc.). (e) Incomplete.

5. South Australia.—The following table gives particulars respecting advances, etc., under State Authorities to 30th June, 1948 :—

ADVANCES TO SETTLERS : SOUTH AUSTRALIA.

Advances.	Advances made during—		Total Advances at 30th June, 1948.	Amount outstanding at 30th June, 1948.	
	1946-47.	1947-48.		Number of Persons.	£
	£	£	£		
Department of Lands—					
Advances to soldier settlers, 1914-18 War ..	13,195	25,304	4,463,331	723	1,966,988
Advances to soldier settlers, 1939-45 War ..	4,817	2,167	6,984	7	6,688
Advances to blockholders ..	..	..	41,451	..	..
Advances for sheds and tanks ..	..	..	75,693	81	11,327
Advances under Closer Settlement Acts ..	30,823	26,147	2,560,909	1,005	1,141,709
Advances under Agricultural Graduates Settlement Act ..	..	..	62,258	30	37,087
Primary Producers Assistance Department—					
Advances in drought-affected areas ..	..	..	2,146,768	338	96,115
Advances under Farmers Relief Acts ..	11,060	9,931	4,429,012	238	86,687
Irrigation Branch—					
Advances to civilians ..	2,779	882	290,630	215	52,017
Advances to soldier settlers ..	1,759	2,805	1,043,825	560	660,443
State Bank of South Australia (Credit Foncier Department) ..	99,453	220,396	5,874,611	1,064	758,022
Advances to Primary Producers ..	48,853	9,908	1,176,395	301	582,208
Advances to settlers for improvements ..	1,000	1,434	1,117,618	563	181,082
Advances under Vermin and Fencing Acts ..	465	386	1,377,159	1,643	159,850
Advances under Loans to Producers Act ..	16,021	10,421	383,573	64	196,024
Re-establishment and Employment Act 1945 ..	196,440	167,500	375,685	487	333,000
Total	426,665	477,281	25,425,902	7,319	6,278,247

6. Western Australia.—The following table gives particulars respecting advances, etc., under State Authorities to 30th June, 1948 :—

ADVANCES TO SETTLERS : WESTERN AUSTRALIA.

Advances.	Advances made during—		Total Advances at 30th June, 1948.	Amount outstanding at 30th June, 1948.	
	1946-47.	1947-48.		Number of Accounts.	£
Department of Lands and Surveys—	£	£	£		
Development loans	324,794	59,663	10,852,535	4,694	3,218,323
Soldier settlement loans	11,403	2,121	6,124,210	(b)	(b)
Cropping advances	53,963	7,761	14,481,525	130	19,982
Group Settlement Advances	16,437	8,907	6,327,742	(b)	(b)
Repurchased Estates—					
Under Agricultural Lands Purchase Act 1909 .. ..	..	..	575,368	363	10,632
Soldier Settlement .. ..	..	..	605,076	828	25,970
Wire and Wire Netting Advances .. ..	..	..	513,748	850	160,048
Rural and Industries Bank—					
Re-establishment and Employment Act 1945	539,806	365,596	994,686	1,546	91,261
Total	945,863	444,048	40,474,890	8,411	3,526,216

(a) Includes capitalization of interest to principal. (b) Not available. Included in Development Loans. (c) Includes all advances made under Drought Relief Assistance and losses incurred.

The establishment of the Rural Industries Bank of Western Australia in October, 1945 resulted in a transfer of many of the developmental accounts to the new bank. At 30th June, 1945 the number of accounts and amounts outstanding were 13,588 and £9,372,992 respectively.

7. Tasmania.—The following table gives particulars respecting advances under State Authorities to 30th June, 1948. Although not regarded as outstanding advances by the Department of Agriculture the figures in connexion with closer and soldier land settlement have been included in the table for comparative purposes; the areas so purchased have been leased on 99 year terms having an option of purchase which the leaseholder may exercise at any time.

ADVANCES TO SETTLERS : TASMANIA.

Advances.	Advances made during—		Total Advances at 30th June, 1948.	Amount outstanding at 30th June, 1948.	
	1946-47.	1947-48.		Number of Persons.	£
Agricultural Bank—	£	£	£		
State Advances Act and Rural Credits	145,350	167,262	2,036,331	408	(a) 179,923
Orchardists' Relief, 1926 .. ..	..	..	46,832	5	207
Unemployed (Assistance to Primary Producers) Relief Act 1930-1931 .. ..	..	..	114,302	65	2,148
Bush Fire Relief Act 1934 .. ..	..	..	14,855	10	275
Flood Sufferers' Relief Act 1929 .. ..	..	..	35,523	11	1,339
Crop Losses, 1934-35 .. ..	..	..	10,086	16	508
Assistance to Fruitgrowers Act 1941 .. ..	..	..	34,556	11	582
Flood Sufferers' Relief Act, 1942 .. ..	..	..	3,764	..	..
Flood Sufferers' Relief Act, 1944 .. ..	..	..	1,902	5	1,323
Re-establishment and Employment Act 1945	78,859	74,071	152,930	215	137,010
Primary Producers' Relief Act 1947 .. ..	..	297,846	297,846	834	297,846
Minister for Agriculture—					
Soldier Settlers—					
Advances	10,648	14,536	884,823	40	(b) 29,730
Purchase of Estates, etc. (c)	11,548	9,117	2,525,076	(d) 795	723,278
Closer Settlers—					
Advances	144	195	92,589	3	2,471
Purchase of Estates, etc. (c)	2,939	1,504	515,910	(d) 182	217,020
Total	249,488	564,531	6,767,325	2,600	1,593,660

(a) Excludes £10,988 forfeited properties. (b) Excludes £200,593 advances capitalized, £70,114 advances written off to bad debts, and £40,789 written off to revaluation. (c) Not regarded as outstanding advances by the Department. (d) Number of leaseholders, including those to whom advances have been made.

8. **Northern Territory.**—During the financial year 1947-48 three advances totalling £146 were made. The total amount advanced to 30th June, 1948 was approximately £25,695. At 30th June, 1948 the balance outstanding from 13 settlers, including interest, was £1,362.

9. **Summary of Advances.**—The following table gives a summary for each State and the Northern Territory to the 30th June, 1948. The particulars so far as they are available represent the total sums advanced to settlers, including amounts spent by the various Governments in the purchase and improvement of estates disposed of by closer and soldier land settlement, while the amounts outstanding reveal the present indebtedness of settlers to the Governments, including arrears of principal and interest but excluding amounts written off debts and adjustments for land revaluations.

ADVANCES TO SETTLERS : AUSTRALIA.

State.	Advances made during—		Total Advances at 30th June, 1948.	Amount outstanding at 30th June, 1948.	
	1946-47.	1947-48.		Number of Persons.	£
	£	£	£		
New South Wales ..	6,653,991	8,520,052	^b 94,300,940	(ab) 32,054	32,075,945
Victoria ..	835,011	3,248,349	66,879,868	11,828	13,244,027
Queensland ..	1,612,150	1,220,167	18,742,793	(b) 7,754	4,714,694
South Australia ..	426,665	477,281	25,425,902	7,319	6,278,247
Western Australia ..	945,863	444,048	40,474,890	8,411	3,526,216
Tasmania ..	249,488	564,531	6,767,325	2,600	1,593,660
Northern Territory ..	..	146	25,695	13	1,362
Total ...	10,723,168	14,474,574	252,617,413	69,979	61,434,151

(a) Number of accounts.

(b) Incomplete.

§ 11. Alienation and Occupation of Crown Lands.

1. **General.**—The figures given in the previous parts of this chapter show separately the areas alienated, in process of alienation, or occupied under various tenures. The following tables set out in summarized form the position in regard to the tenure of land in each State, in the Northern Territory, and in the Australian Capital Territory during the latest year for which information is available—1948 in all cases. Particulars for each

year from 1937 to 1947 appear in *Production Bulletin* No. 42, Part II., page 7. The area unoccupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases and licences, and have been included therein. Lands occupied under leases or licences for pastoral purposes are frequently held on short tenures only, and could thus be made available for settlement practically whenever required.

2. **New South Wales.**—The total area of New South Wales is 198,037,120 acres, of which 25.7 per cent. had been alienated at 30th June, 1948, 7.7 per cent. was in process of alienation, 58.2 per cent. was held under leases and licences and the remaining 8.4 per cent. was unoccupied or held by the Crown.

The following table gives particulars as at 30th June, 1948:—

**ALIENATION AND OCCUPATION OF CROWN LANDS: NEW SOUTH WALES,
30th JUNE, 1948.**

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. Alienated.		3. Held under Leases and Licences.	
Granted and sold prior to 1862 ..	7,146,579	Homestead selections and grants ..	1,667,470
Sold by auction and other sales, 1862 to date ..	15,234,281	Alienable leases, long-term and perpetual ..	26,924,920
Conditionally sold, 1862 to date	32,231,148	Other long-term leases ..	74,258,831
Granted under Volunteer Land Regulations, 1867 to date ..	172,198	Short-term leases and temporary tenures ..	10,134,624
Granted for public and religious purposes ..	265,832	Forest leases ..	2,121,545
		Mining and auriferous leases (a) (c) ..	195,950
	55,050,038	Total ..	115,303,340
Less lands resumed or reverted to Crown ..	4,178,218		
Total ..	50,871,820	4. Unoccupied (b)—Particulars of Lord Howe Island not being available, the area, 3,220 acres, is included under unoccupied (Approximate) ..	16,688,840
2. In Process of Alienation.			
Conditional purchases ..	12,964,458		
Closer settlement purchases ..	1,797,181		
Soldiers' group purchases ..	188,147		
Other forms of sale ..	223,334		
Total ..	15,173,120	5. Total Area of State ..	198,037,120

(a) At 31st December, 1947.

(b) Of this area only 2,758,782 acres are available for selection, the balance being reservations for roads, various public purposes, water frontages, and river and lake surfaces.

(c) Excludes lands held by virtue of miners' rights and business licences; also lease areas applied for, and in occupation, under the Mining Act 1906, but not yet confirmed.

3. **Victoria.**—The total area of Victoria is 56,245,760 acres, of which 52.9 per cent. had been alienated up to the end of 1948; 5.2 per cent. was in process of alienation under deferred payments and closer settlement schemes; 17.7 per cent. was occupied under leases and licences; and 24.2 per cent. was unoccupied or held by the Crown.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : VICTORIA,
31st DECEMBER, 1948.
(Acres.)**

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i>	29,767,882	3. <i>Leases and Licences held—</i>	
		Under Lands Department—	
		Perpetual Leases ..	79,813
		Agricultural College Leases ..	48,005
		Other Leases and Licences ..	20,024
		Temporary (Yearly) Grazing Licences ..	8,849,249
2. <i>In Process of Alienation—</i>		Under Mines Department(a) ..	979,267
Exclusive of Mallee and Closer Settlement Lands ..	439,090		
Mallee Lands (exclusive of Closer Settlement Lands) ..	1,932,201	Total	9,976,358
Closer Settlement Lands ..	550,578		
Village Settlement	34	4. <i>Occupied by the Crown or Unoccupied</i>	13,579,617
Total	2,921,903	5. <i>Total Area of State</i>	56,245,760

(a) Excludes State Coal Mine area 7,575 acres and State Electricity Commission area 2,800 acres.

4. *Queensland.*—The total area of this State is 429,120,000 acres, of which, on 31st December, 1948, 5.3 per cent. was alienated : 1.2 per cent. was in process of alienation ; and 82.7 per cent. was occupied under leases and licences. The remainder, 10.8 per cent., was either unoccupied or held as reserves or for roads.

The distribution is shown in the following table :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : QUEENSLAND,
31st DECEMBER, 1948.
(Acres.)**

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated—</i>		3. <i>Occupied under Leases and Licences—</i>	
By Purchase	22,757,111	Pastoral Leases	243,521,780
Without Payment	92,116	Occupation Licences	17,001,160
		Grazing Selections and Settlement Farm Leases	84,255,577
		Leases—Special Purposes	1,354,996
		Mining Leases	470,562
		Perpetual Leases Selections and Perpetual Lease Prickly Pear Selections	6,434,883
		Auction Perpetual Leases, etc. Forest Grazing Leases (of Reserves)	30,582
			1,919,200
		Total	354,988,740
Total	22,849,227	4. <i>Reserves (net, not leased), Surveyed Roads and Surveyed Stock Routes</i>	20,744,068
2. <i>In Process of Alienation</i>	4,921,093	5. <i>Unoccupied</i>	25,616,872
		6. <i>Total Area of State</i>	429,120,000

(a) Special leases of Crown Land, 501,816 acres ; special leases of reserves, 853,180 acres.

5. *South Australia.*—The area of South Australia is 243,244,800 acres and at 30th June, 1948, 5.5 per cent. was alienated ; 0.3 per cent. in process of alienation ; 70.9 per cent. occupied under leases and licences and 23.3 per cent. occupied by the Crown or unoccupied.

The subjoined table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS : SOUTH AUSTRALIA,
30th JUNE, 1948.

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i> —		3. <i>Held under Lease and Licence</i> —	
Sold	13,250,438	Perpetual Leases, including	
Granted for Public Purposes ..	134,896	Irrigation Leases ..	18,223,916
		Pastoral Leases ..	115,205,542
		Other Leases and Licences ..	2,727,946
		Mining Leases and Licences ..	36,077,751
Total	13,385,334	Total	172,325,155
2. <i>In Process of Alienation</i> ..	777,152	4. <i>Area Unoccupied (a)</i> ..	56,757,159
		5. <i>Total Area of State</i> ..	243,244,800

(a) Includes surveyed roads, railways and other reserves, salt water lakes, lagoons, and fresh water lakes.

6. Western Australia.—The total area of Western Australia is 624,588,800 acres, of which, at 30th June, 1948, 3.5 per cent. was alienated; 1.6 per cent. was in process of alienation; and 34.9 per cent. was occupied under leases and licences issued either by the Lands, Mines or Forests Departments. The balance of 60.0 per cent. was unoccupied.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS : WESTERN AUSTRALIA,
30th JUNE, 1948.

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i>	21,893,785	3. <i>Leases and Licences in Force</i> —	
2. <i>In Process of Alienation</i> —		(i) Issued by Lands Department—	
Midland Railway Concessions ..	54,800	Pastoral Leases ..	211,877,572
Free Homestead Farms ..	473,783	Special Leases ..	2,157,105
Conditional Purchases ..	5,735,127	Leases of Reserves ..	401,386
Selections under the Agricultural Lands Purchase Act ..	445,671	Residential Lots ..	4,771
Grazing Leases ..	3,249,606	Perpetual Leases ..	69,516
Town and Suburban Lots ..	3,168	(ii) Issued by Mines Department—	
Crown Grants of Reserves ..	941	Gold-mining Leases ..	25,181
		Mineral Leases ..	32,001
		Miners' Homestead Leases ..	29,835
		(iii) Issued by Forests Department—	
		Timber Permits ..	3,148,336
Total	9,963,208	Total	217,806,963
		4. <i>Area Unoccupied (a)</i> ..	374,924,844
		5. <i>Total Area of State</i> ..	624,588,800

(a) Includes reservations for roads and various public purposes, 50,409,691 acres.

7. *Tasmania*.—The total area of Tasmania is 16,778,000 acres, of which, at 31st December, 1948, 36.4 per cent. had been alienated; 2.3 per cent. was in process of alienation; 16.1 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement; while the remainder (45.2 per cent.) was unoccupied or reserved by the Crown.

The following table shows the distribution :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : TASMANIA,
31st DECEMBER, 1948.**

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. <i>Alienated</i>	6,110,902	3. <i>Leases and Licences</i> —continued.	
		(i) Issued by Lands Department—continued.	
		Soldier Settlement ..	153,121
2. <i>In Process of Alienation</i> ..	376,949	Short-Term Leases ..	11,134
		(ii) Issued by Mines Department ..	22,681
3. <i>Leases and Licences</i> —		Total	2,707,260
(i) Issued by Lands Department—			
Islands	126,341	4. <i>Area Occupied by the Crown or</i>	
Ordinary Leased Land ..	1,900,114	Unoccupied (a)	7,582,889
Land Leased for Timber	439,467		
Closer Settlement ..	54,402	5. <i>Total Area of State</i>	16,778,000

(a) Includes reservations for roads and various other public purposes, 3,967,808 acres; lands occupied by Commonwealth or State Departments, 21,724 acres; and land acquired for soldier and closer settlement but not leased, 145,543 acres.

8. *Northern Territory*.—The area of the Northern Territory is 335,116,800 acres, of which, at 30th June, 1948, only 0.1 per cent. was alienated; 47.1 per cent. was held under leases and licences; 13.5 per cent. was reserved for aboriginal, defence and public requirements; and the remaining 39.3 per cent. was unoccupied and unreserved.

The following shows the mode of occupancy of areas at 30th June, 1948 :—

**ALIENATION AND OCCUPATION OF CROWN LANDS : NORTHERN TERRITORY
30th JUNE, 1948.**

(Acres.)

Particulars.	Area.
1. <i>Alienated</i>	455,321
2. <i>Leased</i> —	
Pastoral leases	115,144,320
Other leases, licences and mission stations ..	42,451,200
Total	157,595,520
3. <i>Reserved</i> —	
Aboriginal, defence and public requirements ..	45,451,833
4. <i>Unoccupied and Unreserved</i>	131,614,126
5. <i>Total Area</i>	335,116,800

9. *Australian Capital Territory*.—Alienated land of the Territory (excluding the Jervis Bay area) at the end of 1948 comprised 10.9 per cent. of the total area, land in process of alienation 7.0 per cent. land held under lease and licence 50.2 per cent. land otherwise occupied, including city tenures 5.3 per cent. and unoccupied 26.6 per cent.

The following table gives particulars of land areas in the Australian Capital Territory (excluding the Jervis Bay area) at the end of 1948 :—

ALIENATION AND OCCUPATION OF CROWN LANDS : AUSTRALIAN CAPITAL TERRITORY (a), 31st DECEMBER, 1948.
(Acres.)

Particulars.	Area.
1. <i>Alienated</i>	63,635
2. <i>In Process of Alienation</i>	41,056
3. <i>Leased, etc.</i> —	
Grazing, agriculture, etc., leases	290,581
Grazing licences	2,725
Total	293,306
4. <i>Otherwise Occupied (b)</i>	30,870
5. <i>Unoccupied</i>	153,933
6. <i>Total Area (a)</i>	582,800

(a) Excludes the Jervis Bay area of 18,000 acres—11,788 acres leased and 6,212 acres otherwise occupied—making a grand total of 600,800 acres. (b) Includes city area tenures.

10. **Summary.**—The following table gives a summary for each State and Territory of the alienation and occupation of Crown lands for 1947 and 1948 :—

ALIENATION AND OCCUPATION OF CROWN LANDS : AUSTRALIA.

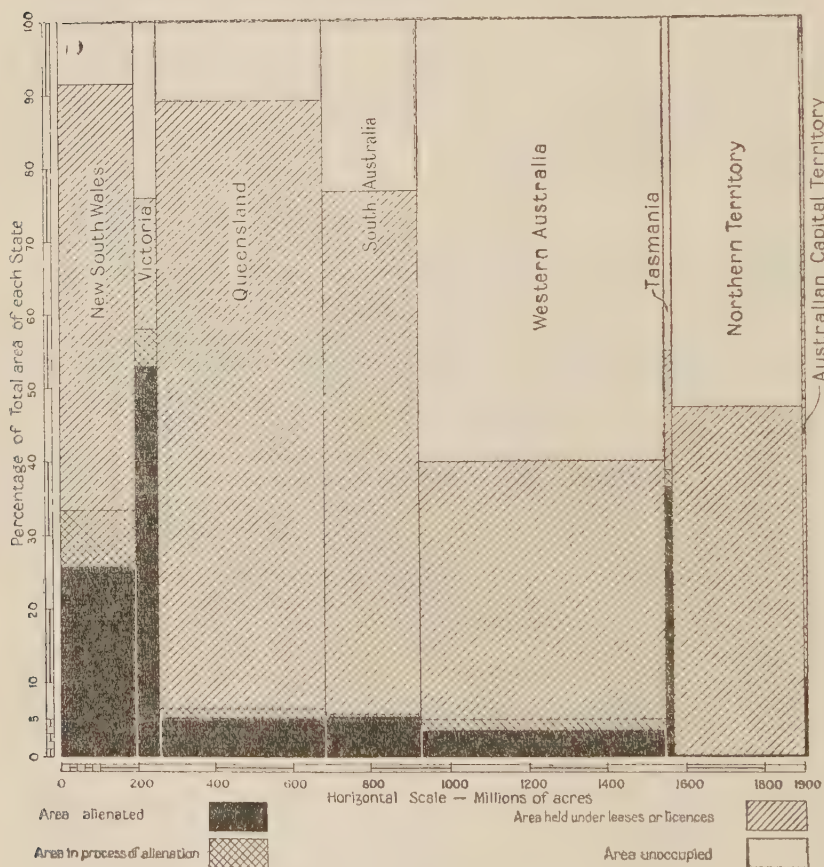
State or Territory.	Private Lands.				Crown Lands.				Total Area.
	Alienated.		In Process of Alienation.		Leased or Licensed.		Other.		
	'000 Acres.	%	'000 Acres.	%	'000 Acres.	%	'000 Acres.	%	
1947.									
N.S.W. (a) ..	51,439	25.97	14,909	7.53	114,973	58.06	16,716	8.44	198,037
Victoria (b) ..	29,599	52.62	3,045	5.41	9,240	16.43	14,362	25.54	56,246
Queensland (b) ..	22,655	5.28	5,118	1.19	354,432	82.60	46,915	10.93	429,120
S. Aust. (a) ..	13,178	5.42	856	0.35	171,254	70.40	57,957	23.83	243,245
W. Aust (a) ..	19,996	3.20	12,087	1.94	213,884	34.24	378,621	60.62	624,588
Tasmania (b) ..	6,080	36.24	388	2.31	2,744	16.36	7,566	45.09	16,778
N.T. (a) ..	457	0.14	..	..	154,201	46.01	180,459	53.85	335,117
A.C.T. (b) ..	58	9.65	48	7.99	304	50.58	191	31.78	601
Australia ..	143,462	7.54	36,451	1.91	1,021,032	53.63	702,787	36.92	1,903,732
1948.									
N.S.W. (a) ..	50,872	25.69	15,173	7.66	115,303	58.22	16,689	8.43	198,037
Victoria (b) ..	29,768	52.92	2,922	5.20	9,976	17.74	13,580	24.14	56,246
Queensland (b) ..	22,849	5.32	4,921	1.15	354,989	82.73	46,301	10.80	429,120
S. Aust. (a) ..	13,385	5.50	777	0.32	172,325	70.85	56,758	23.33	243,245
W. Aust (a) ..	21,894	3.51	9,963	1.59	217,807	34.87	374,924	60.03	624,588
Tasmania (b) ..	6,111	36.42	377	2.25	2,707	16.13	7,583	45.20	16,778
N.T. (a) ..	455	0.14	..	..	157,596	47.03	177,066	52.83	335,117
A.C.T. (b) ..	64	10.65	41	6.82	305	50.75	191	31.78	601
Australia ..	145,398	7.64	34,174	1.79	1,031,008	54.16	693,152	36.41	1,903,732

(a) At 30th June.

(b) At 31st December.

11. **Diagram showing Condition of Public Estate.**—The following diagram shows the condition of the public estate during the year 1948. The square itself represents the total area of Australia, while the relative areas of individual States are shown by the vertical rectangles. The areas alienated from the State; those in process of alienation under various systems of deferred payments; and the areas held under leases or licences are indicated by the differently-shaded areas as described in the reference given below the diagram, and the areas unoccupied are left unshaded.

TENURE OF LAND.



CHAPTER V.

TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

In the system of recording statistics of oversea shipping, Australia is considered as a unit, and, therefore, only one entry and one clearance is counted for each voyage, without regard to the number of States visited (*see also* Section 5 following, paragraph 1.)

On the arrival at, or departure from, a port in Australia, whether from or for an oversea country or from another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers and cargo. At the end of each month the information so obtained is forwarded to this Bureau. This arrangement has been in operation since 1st July, 1924.

The net tonnage is the gross tonnage less certain deductions on account of crew spaces, engine room, water ballast and other spaces not used for passengers or cargo. The unit of measurement is a ton of 100 cubic feet.

From 1st July, 1914 the Trade and Shipping of Australia have been recorded for the fiscal years ending 30th June.

Commencing with 1935-36 particulars of sailing vessels with auxiliary engines, previously included in the columns headed "Steam", have been included in those headed "Sailing", this classification being considered more correct as the main method of propulsion of these vessels is sail.

The outbreak of war with Japan in December, 1941 resulted in Australia becoming the land base of operations in the South-West Pacific Area. The outcome of this action was the transport by sea to Australia of large numbers of Allied troops with huge quantities of arms and equipment, munitions and stores, which resulted in a substantial increase in the volume of shipping in ports throughout Australia. Particulars regarding these vessels have been excluded from the following tables of "oversea" and "interstate" shipping movement except in Section 3, paragraph 1. The published tables, therefore (except Section 3, paragraph 1), relate primarily to vessels engaged in normal trade (i.e., carrying part or full cargo for civil purposes), and are strictly comparable with pre-war figures.

The total volume of all shipping including vessels carrying troops and war supplies which entered the principal ports of Australia during the years 1938-39 and 1944-45 to 1947-48 is shown in Section 3, paragraph 1. These particulars were compiled from information supplied by the State authorities controlling ports and harbours and include all vessels entering ports with the exception of warships. The year 1938-39 has been inserted for comparative purposes.

As a result of enemy activity the Customs Officers were withdrawn from the ports of Thursday Island (Queensland), Broome (Western Australia) and Darwin (Northern Territory) during February, March and April, 1942, respectively, and the ports closed as Customs Stations. Consequently, no particulars are available of shipping movements at these ports between the dates named and June, 1945, as they were still under the control of the defence authorities. Shipping in these ports during this period was predominantly military and naval in character. The port of Darwin (Northern Territory) was reopened as a Customs Station in July, 1945, Broome in December, 1945, and Thursday Island in August, 1946.

§ 2. Oversea Shipping.

1. Total Movement.—The following table shows the number and net tonnage of oversea steam and motor vessels and sailing vessels which entered Australian ports during the years 1938-39 to 1947-48 :—

OVERSEA SHIPPING : VESSELS ENTERED, AUSTRALIA.

Year.	Steam and Motor.		Sailing.		Total.	
	Vessels.	Net Tons ('000).	Vessels.	Net Tons ('000).	Vessels.	Net Tons ('000).
1938-39	1,725	6,684	151	27	1,876	6,711
1939-40	1,573	6,459	101	7	1,674	6,466
1940-41	1,260	5,372	56	7	1,316	5,379
1941-42	1,248	5,166	28	8	1,276	5,174
1942-43	943	3,820	13	4	956	3,824
1943-44	1,085	4,482	9	2	1,094	4,484
1944-45	1,051	4,480	8	4	1,059	4,484
1945-46	1,140	5,260	6	3	1,146	5,263
1946-47	1,187	5,183	15	3	1,202	5,186
1947-48	1,448	6,075	22	8	1,470	6,083

The average tonnage per vessel entered has risen from 3,577 tons per vessel in 1938-39 to 4,137 tons in 1947-48.

Particulars regarding the total oversea movement of shipping for each year from 1822 to 1920-21 will be found in Official Year Book No. 15, p. 507, for each year from 1921-22 to 1930-31 in Official Year Book No. 25, p. 189, and for each of the years 1931-32 to 1937-38 in Official Year Book No. 34, p. 81.

2. Total Oversea Shipping, States.—The following table shows the numbers and net tonnages of vessels which entered and cleared the various States direct from and to oversea countries during the years 1946-47 and 1947-48 :—

SHIPPING ENTERED FROM AND CLEARED TO OVERSEA COUNTRIES DIRECT, 1946-47 AND 1947-48.

State or Territory.	1946-47.				1947-48.			
	Entered.		Cleared.		Entered.		Cleared.	
	Vessels.	Net Tonnage ('000).	Vessels.	Net Tonnage ('000).	Vessels.	Net Tonnage ('000).	Vessels.	Net Tonnage ('000).
New South Wales	427	1,753	460	1,844	454	1,699	433	1,596
Victoria	196	895	183	824	238	1,060	223	984
Queensland	164	635	232	669	198	658	250	695
South Australia ..	116	490	92	391	138	590	119	512
Western Australia	279	1,337	299	1,405	398	1,906	433	1,995
Tasmania	14	62	16	73	30	143	9	40
Northern Territory	6	14	5	14	14	27	12	23
Total	1,202	5,186	1,287	5,220	1,470	6,083	1,479	5,845

3. Shipping Communication with various Countries.—Records of the number and tonnage of vessels arriving from and departing to particular countries, as they are invariably made, may be misleading for the reason that the tonnage of a vessel can be recorded against one country on'y, notwithstanding that the same vessel on the same

voyage may carry cargo or passengers to or from Australia from or to several countries. For instance, a mail steamer on a voyage from the United Kingdom to Australia, through the Suez Canal, may call at Marseilles, Genoa, Port Said, Aden and Colombo, yet can be credited only to the United Kingdom, the country where the voyage commenced, to the exclusion of all of the others from the records. Also a number of vessels touch at New Zealand ports on their voyages to and from the United States of America and Canada, but their tonnages are not included in the records of Australian shipping trade with New Zealand. Similarly, the record of shipping engaged in trade between Australia and the United Kingdom via South African ports does not show tonnage to and from South Africa, the whole of it being included in the figures for United Kingdom. In view of this defect, statistics relating to the direction of the shipping to and from Australia are restricted to the following tables in which countries situated on the main trade routes are grouped together. This grouping into larger geographical divisions to some extent avoids the limitations referred to, except, as already pointed out, in the case of Africa and New Zealand.

DIRECTION OF OVERSEA SHIPPING : AUSTRALIA.

Countries.	Cargo and Ballast.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
NET TONNAGE ENTERED ('000).							
United Kingdom and European Countries	Cargo	1,878	328	416	795	943	1,130
	Ballast	121	3	..	18	2	6
New Zealand ..	Cargo	767	182	234	317	302	303
	Ballast	242	152	80	188	224	223
Asiatic Countries and Pacific Islands ..	Cargo	2,206	1,240	1,898	2,071	1,984	2,288
	Ballast	256	665	478	445	426	933
Africa ..	Cargo	44	236	289	360	370	273
	Ballast	123	29	..	3	47	88
North and Central America ..	Cargo	1,059	1,505	982	1,024	861	823
	Ballast	..	31	43	12	1	3
South America ..	Cargo	10	113	64	30	26	11
	Ballast	5	..	..	..	..	2
Total ..	Cargo	5,964	3,604	3,883	4,597	4,486	4,828
	Ballast	747	880	601	666	700	1,255
		6,711	4,484	4,484	5,263	5,186	6,083

NET TONNAGE CLEARED ('000).

United Kingdom and European Countries ..	Cargo	2,775	701	855	1,205	1,043	1,990
	Ballast	13	4	..	7	17	..
New Zealand ..	Cargo	901	307	268	502	575	565
	Ballast	37	24	27	70	75	11
Asiatic Countries and Pacific Islands ..	Cargo	1,687	1,915	1,501	1,548	1,387	1,601
	Ballast	743	170	491	889	839	980
Africa ..	Cargo	172	306	178	98	142	172
	Ballast	6	22	21	..	4	3
North and Central America ..	Cargo	440	1,093	746	620	409	373
	Ballast	46	573	429	408	108	144
South America ..	Cargo	12	38	39	3	9	..
	Ballast	..	50	94	80	12	..
Total ..	Cargo	5,990	4,360	3,587	3,976	4,165	4,707
	Ballast	845	843	1,062	1,454	1,055	1,138
		6,835	5,203	4,649	5,430	5,220	5,845

4. Nationality of Oversea Shipping.—Due to war conditions, shipping of British nationality progressively declined during the years 1939-40 to 1943-44 to 43.40 per cent. compared with 72.82 per cent. in 1938-39. On the other hand, shipping of United States of America nationality visiting Australia during the same period advanced to

33.07 per cent. in 1943-44 compared with 2.61 per cent. in 1938-39. During the years 1944-45 to 1946-47 the shipping of British nationality progressively increased to 76.22 per cent. in 1946-47 but declined slightly to 72.79 per cent. in 1947-48; the tonnage of vessels of United States of America nationality declined during this period from 33.07 per cent. in 1943-44 to 9.40 per cent. in 1947-48.

Particulars of the nationality of oversea shipping for the five years ended 30th June, 1948, compared with the year 1938-39, are given in the following table:—

OVERSEA SHIPPING : NATIONALITY OF VESSELS ENTERED, AUSTRALIA.

Nationality.	Net Tonnage ('000).					
	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
BRITISH—						
Australian	331	279	188	308	153	86
United Kingdom	3,744	1,338	1,713	3,024	3,537	3,988
Canadian	20	80	190	106	47	48
New Zealand	563	145	114	89	109	104
Other British	229	104	85	57	107	202
Cargo	4,379	1,500	2,049	3,074	3,420	3,588
Ballast	508	446	241	510	533	840
Total British	4,887	1,946	2,290	3,584	3,953	4,428
Per cent. on total	72.82	43.40	51.07	68.10	70.22	72.79
FOREIGN—						
Danish	55	..	..	3	17	50
Dutch	291	271	122	132	225	244
French	108	9	19	37	63	76
German	141	..	..	..	..	..
Italian	68	..	..	..	15	9
Japanese	330	..	..	10	..	..
Norwegian	325	470	301	213	218	206
Swedish	124	80	90	116	119	..
United States of America	175	1,483	1,463	985	437	571
Other Foreign	207	225	199	183	139	499
Cargo	1,585	2,104	1,834	1,523	1,066	1,240
Ballast	239	434	300	156	167	415
Total Foreign	1,824	2,538	2,194	1,679	1,233	1,655
Per cent. on total	27.18	56.60	48.93	31.90	23.78	27.21
Cargo	5,964	3,604	3,883	4,597	4,486	4,828
Per cent. on total	88.87	80.38	86.60	87.35	86.50	79.37
Ballast	747	880	601	666	700	1,255
Per cent. on total	11.13	19.62	13.40	12.65	13.50	20.63
Grand Total	6,711	4,484	4,484	5,263	5,186	6,083

The Australian tonnage which entered Australia from overseas during the year 1947-48 represented 1.41 per cent. of the total tonnage entered and was confined mainly to the New Zealand and Pacific Island trade.

§ 3. Shipping at Principal Ports.

1. Total Shipping, Australia.—The following table shows the total volume of shipping—oversea, interstate and coastwise—which entered the principal ports of Australia during the years 1944-45 to 1947-48 compared with 1938-39, irrespective of whether these vessels were transporting civilian goods or troops and war equipment. Warships are excluded from the table.

TOTAL SHIPPING ENTERED AT PRINCIPAL PORTS : AUSTRALIA.

Port of Entry.	1938-39.		1944-45.		1945-46.		1946-47.		1947-48.	
	Ves- sels.	Net Tons (⁰ 000).	Ves- sels.	Net Tons (⁰ 000).	Ves- sels.	Net Tons (⁰ 000).	Ves- sels.	Net Tons (⁰ 000).	Ves- sels.	Net Tons (⁰ 000).
<i>New South Wales—</i>										
Sydney ..	7,384	11 650	3,805	6,479	3,671	6,286	3,628	5,837	3,750	6,225
Kembla ..	850	1,225	447	901	299	606	361	932	351	928
Newcastle ..	4,273	5,099	2,308	3,013	2,307	2,957	2,399	3,293	2,320	3,430
<i>Victoria—</i>										
Melbourne ..	3,384	8,537	1,777	4,612	1,650	3,632	1,821	4,835	2,012	5,599
Geelong ..	486	850	115	363	126	158	138	402	184	605
<i>Queensland—</i>										
Brisbane ..	1,472	4,916	904	2,551	482	1,413	517	1,628	560	1,820
Bowen ..	188	336	256	294	96	168	104	181	70	147
Cairns ..	725	790	801	801	357	312	227	292	239	350
Gladstone ..	155	526	85	120	78	121	57	128	47	144
Mackay ..	219	546	52	121	45	108	67	129	49	117
Rockhampton ..	252	596	49	48	50	60	55	97	47	111
Thursday Island ..	158	303	(a)	(a)	(a)	(a)	46	9	85	12
Townsville ..	641	1,473	592	1,326	218	507	291	407	216	494
<i>South Australia—</i>										
Adelaide ..	2,988	5,524	2,237	1,668	2,170	1,682	2,446	2,788	2,595	3,319
Lincoln ..	438	493	374	470	375	454	395	459	440	537
Pirie ..	619	815	297	584	270	532	303	630	301	730
Wallaroo ..	281	220	213	138	163	116	165	140	224	193
Whyalla ..	680	1,037	423	838	360	685	448	1,111	476	1,137
<i>Western Australia—</i>										
Fremantle ..	846	4,012	665	2,644	495	2,427	571	2,583	738	3,284
Albany ..	125	511	32	112	46	148	44	142	49	200
Bunbury ..	107	240	70	180	65	174	50	145	62	184
Carnarvon ..	115	183	47	84	54	96	73	96	78	99
Geraldton ..	132	291	102	146	48	128	69	177	94	239
<i>Tasmania—</i>										
Hobart ..	616	1,153	251	410	234	369	270	420	293	540
Burnie ..	577	781	228	229	193	237	165	187	163	227
Devonport ..	492	476	282	295	235	241	206	211	183	223
Launceston ..	460	502	272	156	252	169	301	281	290	292
<i>Northern Territory—</i>										
Darwin ..	176	184	(a)	(a)	9	31	26	57	33	55

(a) Port closed.

2. Australia, New Zealand and United Kingdom.—The following table shows the total shipping tonnage which entered the principal ports of Australia during 1947-48, of New Zealand during 1946 and of the United Kingdom during 1948.

SHIPPING AT PORTS, AUSTRALIA, NEW ZEALAND AND THE UNITED KINGDOM.

Port.	Net Tonnage Entered ('000).	Port.	Net Tonnage Entered ('000).
AUSTRALIA—		ENGLAND AND WALES—	
Sydney (N.S.W.) ..	6,225	London ..	22,116
Melbourne (Vic.) ..	5,599	Liverpool (inc. Birkenhead) ..	14,665
Newcastle (N.S.W.) ..	3,430	Southampton ..	11,631
Adelaide (S.A.) ..	3,319	Tyne Ports ..	6,124
Fremantle (W.A.) ..	3,284	Hull ..	4,478
Brisbane (Qld.) ..	1,820	Cardiff ..	4,363
Whyalla (S.A.) ..	1,137	Bristol ..	3,740
Kembla (N.S.W.) ..	928	Manchester (inc. Runcorn) ..	3,167
Pirie (S.A.) ..	730	Swansea ..	2,358
Gaelong (Vic.) ..	605	Plymouth ..	1,433
Hobart (Tas.) ..	540		
Lincoln (S.A.) ..	537		
Townsville (Qld.) ..	494		
Cairns (Qld.) ..	350		
Launceston (Tas.) ..	292		
Geraldton (W.A.) ..	239		
Burnie (Tas.) ..	227		
Devonport (Tas.) ..	223		
NEW ZEALAND—		SCOTLAND—	
Wellington ..	2,741	Glasgow ..	5,142
Auckland ..	1,711		
Lyttelton ..	1,513		
Dunedin ..	520		
Napier ..	224		
Bluff ..	208		
New Plymouth ..	202	NORTHERN IRELAND—	
		Belfast ..	4,758

§ 4. Vessels Built and Registered.

1. Vessels Built.—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1938 and 1944 to 1948, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burden if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners

VESSELS BUILT IN AUSTRALIA.

Year.	Steam.			Motor.(a)			Sailing.			Total.		
	No.	Tonnage.		No.	Tonnage.		No.	Tonnage.		No.	Tonnage.	
		Gross.	Net.		Gross.	Net.		Gross.	Net.		Gross.	Net.
1938 ..	..	..	..	11	721	394	..	..	..	11	721	394
1944 ..	4	20,327	10,843	4	121	82	..	..	..	8	20,448	10,925
1945 ..	5	25,302	14,063	22	1,240	748	2	24	15	29	26,566	14,826
1946 ..	4	9,448	4,571	19	981	678	5	240	160	28	10,669	5,409
1947 ..	5	16,100	8,391	25	1,426	912	8	296	296	38	17,822	9,599
1948 ..	3	14,583	8,604	9	1,376	741	..	..	..	12	15,959	9,345

(a) Including vessels with auxiliary motors.

2. **Vessels Registered.**—The following table shows the number and net tonnage of steam, sailing and other vessels on the register of each State on the 31st December, 1948:—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1948.

State or Territory.	Steam and Motor.		Sailing.				Barges, Hulks, Dredges, &c., not Self-propelled.		Total.	
			Propelled by Sail Only.		Fitted with Auxiliary Power.					
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.
New South Wales	536	76,867	176	6,193	138	1,962	44	9,741	894	94,763
Victoria ..	177	157,325	42	528	39	1,229	41	16,819	299	175,901
Queensland ..	87	26,214	103	1,933	71	1,085	48	7,950	309	37,182
South Australia ..	83	30,845	15	307	35	1,759	38	5,833	171	38,744
Western Australia	33	3,212	230	3,338	58	1,435	5	396	326	8,381
Tasmania ..	42	4,151	61	2,150	65	1,710	1	382	169	8,393
Northern Territory	..	..	16	149	3	80	..	..	19	229
Total ..	958	298,614	643	14,598	409	9,260	177	41,121	2,187	363,593

3. **World Shipping Tonnage.**—The following table shows the number and gross tonnage of steam and motor, and of sailing vessels owned at the 1st July, 1948 by the most important maritime countries, together with the proportion of the grand total owned by each country. Particulars of the Oil Tanker fleet are also included in the table.

WORLD SHIPPING TONNAGE, 1st JULY, 1948.

Nationality.	Steamers.		Motorships.		Total Steamers and Motorships.(b)	
	No.	Gross Tonnage ('000).	No.	Gross Tonnage ('000).	No.	Gross Tonnage ('000).
Great Britain and Northern Ireland	4,664	12,567	1,361	5,458	6,025	18,025
Australia	280	402	64	123	344	525
Canada(a)	633	1,816	351	191	984	2,007
New Zealand	32	123	69	60	151	183
Other British Countries ..	574	826	413	149	987	975
Total British Countries	6,233	15,734	2,258	5,981	8,491	21,715
Argentina Republic	228	537	102	145	330	682
Belgium	104	245	106	194	210	439
Brazil	270	590	61	116	331	706
China	310	735	59	74	369	809
Denmark	311	461	356	662	667	1,123
Finland	227	385	63	61	290	446
France	787	2,106	326	680	1,113	2,786
Germany	603	294	633	134	1,236	428
Greece	288	1,260	67	26	355	1,286
Holland	483	1,443	939	1,294	1,422	2,737
Italy	403	1,661	405	439	808	2,100
Japan	649	788	555	236	1,204	1,024
Norway	913	1,547	950	2,714	1,863	4,261
Panama	432	2,326	83	390	515	2,716
Portugal	157	286	143	176	300	462
Soviet Union (Russia) ..	784	1,680	182	417	966	2,097
Spain	738	846	307	301	1,045	1,147
Sweden	633	669	614	1,304	1,247	1,973
United States of America(a)	4,211	27,810	1,014	1,355	5,225	29,165
Other Foreign Countries ..	930	1,008	123	192	1,353	2,190
Total Foreign Countries	13,461	47,367	7,388	11,210	20,849	58,577
Grand Total ..	19,694	63,101	9,646	17,191	29,340	80,292

Nationality.	Sailing Vessels and Barges.		Total, Steamers, Motorships and Sailing Vessels.(b)				Oil Tankers.(c)	
			No.		Percentage on Total.			
	No.	Gross Tonnage (⁰ 00).	No.	Gross Tonnage (⁰ 00).	No.	Gross Tonnage (⁰ 00).	No.	Gross Tonnage (⁰ 00).
Great Britain and Northern Ireland	269	87	6,294	18,112	20.70	22.34	479	3,528
Australia	8	3	352	528	1.16	0.65	55	224
Canada(a)	54	88	1,038	2,095	3.41	2.58	..	..
New Zealand	2	3	153	186	0.50	0.23	..	..
Other British Countries ..	109	31	1,096	1,006	3.61	1.24	11	32
Total British Countries	442	212	8,933	21,927	29.38	27.04	545	3,784
Argentine Republic	41	20	371	702	1.22	0.87	29	169
Belgium .. ..	..	..	210	439	0.69	0.54	7	48
Brazil	11	3	342	709	1.12	0.88	..	..
China	2	1	371	810	1.22	1.00	..	..
Denmark .. ..	..	..	667	1,123	2.19	1.38	15	125
Finland	7	12	297	458	0.98	0.56	..	..
France	32	13	1,145	2,799	3.77	3.45	56	462
Germany	4	3	1,240	431	4.08	0.53	1	1
Greece .. ..	..	..	355	1,286	1.17	1.59	..	..
Holland	10	5	1,432	2,742	4.71	3.38	91	468
Italy	44	9	852	2,109	2.80	2.60	64	452
Japan .. ..	..	..	1,204	1,024	3.96	1.26	2	10
Norway	2	1	1,865	4,202	6.13	5.26	210	1,829
Panama	3	5	518	2,721	1.70	3.36	173	1,369
Portugal	20	9	320	471	1.05	0.58	..	..
Soviet Union (Russia) ..	13	10	970	2,107	3.22	2.60	30	130
Spain	39	8	1,084	1,155	3.57	1.43	22	128
Sweden	3	2	1,250	1,975	4.11	2.44	38	333
United States of America(a)	299	437	5,524	29,602	18.17	36.51	626	5,473
Other Foreign Countries ..	93	32	1,446	2,222	4.76	2.74	120	556
Total Foreign Countries	623	570	21,472	59,147	70.62	72.96	1,484	11,553
Grand Total ..	1,065	782	30,405	81,074	100.00	100.00	2,029	15,337

(a) Includes Great Lakes shipping.
1,000 gross tons and upwards.

(b) Vessels 100 gross tons and upwards.

(c) Tankers

The foregoing figures have been compiled from *Lloyds' Register of Shipping* for 1949.

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements: (a) Vessels engaged solely in interstate trade: and (b) Vessels trading between Australia and oversea countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not now engage in interstate carrying.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the oversea vessels (b) some explanation is necessary. Each State desires that its shipping statistics (which are prepared in this Bureau) should show in full its shipping communication with oversea countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an oversea country—say United Kingdom—*via* another State, is recorded in the second State as from United Kingdom *via* States, thus distinguishing the movement from a *direct* oversea entry. Continuing the voyage, the vessel is again recorded for the statistics of the third State as from United Kingdom *via* other States. On an inward voyage the *clearance* from the first State to the second State is a *clearance* interstate, and is included with interstate tonnage in conformity with the pre-federation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movement, must for the individual States be recorded as “Oversea *via* other States” or “Interstate” according to the direction of the movement. The significance of the record of these movements will be more clearly seen from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage—Sydney (New South Wales)—*via* South Australia and Victoria. From the terminal port the vessel will commence the outward voyage, and retrace its inward track.

ITINERARY OF AN OVERSEA VESSEL ON AUSTRALIAN COAST.

Particulars.	Recorded as—	
	For the State and for Australia.	For the States.
Inward Voyage—		
Enters Fremantle from United Kingdom	Oversea direct	Interstate direct
Clears Fremantle for Adelaide .. ..	.. ..	.. ..
Enters Adelaide from United Kingdom	.. ..	.. ..
<i>via</i> Fremantle .. ..	.. ..	Oversea <i>via</i> States
Clears Adelaide for Melbourne .. ..	.. ..	Interstate direct
Enters Melbourne from United Kingdom	.. ..	.. ..
<i>via</i> Adelaide .. ..	.. ..	Oversea <i>via</i> States
Clears Melbourne for Sydney .. ..	.. ..	Interstate direct
Enters Sydney from United Kingdom	.. ..	.. ..
<i>via</i> Melbourne .. ..	.. ..	Oversea <i>via</i> States
Outward Voyage—		
Clears Sydney for United Kingdom <i>via</i>		
Melbourne .. ..	.. ..	Oversea <i>via</i> States
Enters Melbourne from Sydney .. ..	.. ..	Interstate direct
Clears Melbourne for United Kingdom <i>via</i>		
Adelaide .. ..	.. ..	Oversea <i>via</i> States
Enters Adelaide from Melbourne .. ..	.. ..	Interstate direct
Clears Adelaide for United Kingdom <i>via</i>		
Fremantle .. ..	.. ..	Oversea <i>via</i> States
Enters Fremantle from Adelaide .. ..	.. ..	Interstate direct
Clears Fremantle for United Kingdom ..	Oversea direct	.. ..

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows. (a) The aggregate of all ships recorded for each State as “Oversea *direct*” gives the oversea shipping for Australia as a whole;

(b) the aggregate for all ships recorded in any State as "Oversea direct" plus those recorded as "Oversea via States" gives the total *oversea shipping* for that State; and (c) the aggregate for all ships recorded as "Oversea via States" may also be used, together with those recorded as "Interstate direct," to furnish figures showing the total interstate *movement* of shipping.

It should be remembered, however, that all overseas vessels do not follow the same itinerary as the vessel in the table above.

2. *Interstate Movement.*—(i) *Interstate direct.* The following table shows the number and tonnage of vessels recorded as having entered each State from any other State (including *oversea* vessels on interstate direct voyages) during each of the years 1943-44 to 1947-48 compared with the year 1938-39. The shipping of the Murray River, between the States of New South Wales, Victoria and South Australia, is excluded :—

INTERSTATE SHIPPING : NUMBER AND TONNAGE OF VESSELS ENTERED.

State or Territory.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
NUMBER.						
New South Wales	2,183	1,282	1,209	1,112	1,136	1,133
Victoria	2,243	1,210	1,143	1,104	1,209	1,224
Queensland	639	389	410	303	340	306
South Australia	1,036	562	573	482	647	678
Western Australia	382	209	192	221	256	326
Tasmania	1,301	773	739	695	706	717
Northern Territory	39	(a)	(a)	6	14	16
Total	7,823	4,425	4,266	3,923	4,308	4,400

NET TONNAGE ('000).

New South Wales	6,205	2,535	2,391	2,439	3,041	2,977
Victoria	4,751	1,741	1,798	1,815	2,568	2,690
Queensland	1,730	621	763	587	728	587
South Australia	3,322	1,414	1,471	1,247	1,871	1,963
Western Australia	2,019	745	684	1,045	1,165	1,395
Tasmania	1,770	604	635	674	739	772
Northern Territory	103	(a)	(a)	20	28	25
Total	19,900	7,660	7,742	7,827	10,140	10,409

(a) Port of Darwin closed.

From 1938-39 the total net tonnage declined steadily each year until 1942-43, when it represented only 38 per cent. of the total for the pre-war year. It remained practically unchanged during the next three years, but increased by over 29 per cent. in 1946-47. There was little change in 1947-48, the tonnage for that year being about 52 per cent. of the 1938-39 total.

(ii) *Oversea via States.* To ascertain the aggregate movement of shipping between the States, including the total interstate movements of overseas vessels, the figures in the

following table which show the number and tonnage of vessels entered from or cleared for oversea countries via other Australian States, must be added to those in the preceding table :—

SHIPPING ENTERED AND CLEARED FROM AND TO OVERSEA COUNTRIES VIA OTHER AUSTRALIAN STATES.

State or Territory.	Entered.		Cleared.		Total.	
	Vessels.	Net Tonnage ('000).	Vessels.	Net Tonnage ('000).	Vessels.	Net Tonnage ('000).
1946-47.						
New South Wales ..	258	1,265	309	1,304	567	2,569
Victoria ..	274	1,381	260	1,294	543	2,675
Queensland ..	94	475	76	379	170	854
South Australia ..	148	725	146	644	294	1,369
Western Australia ..	6	31	20	95	26	126
Tasmania ..	31	156	28	129	59	285
Northern Territory ..	3	8	..	..	3	8
Total ..	814	4,041	848	3,845	1,662	7,886

1947-48.						
New South Wales ..	361	1,811	345	1,552	706	3,363
Victoria ..	384	1,930	325	1,541	709	3,471
Queensland ..	146	731	99	480	245	1,211
South Australia ..	208	1,098	192	921	400	2,019
Western Australia ..	17	77	29	128	46	205
Tasmania ..	40	190	44	206	84	396
Northern Territory ..	1	..	1	..	2	..
Total ..	1,157	5,837	1,035	4,828	2,192	10,665

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their oversea voyages.

(iii) *Total, Australia.* The appended table shows the total interstate movement of shipping, including oversea vessels travelling oversea via States and interstate direct, for each of the years 1938-39 and 1943-44 to 1947-48:—

TOTAL INTERSTATE MOVEMENT OF SHIPPING : AUSTRALIA.

Year.	Entered.		Cleared.	
	Vessels.	Net Tonnage ('000).	Vessels.	Net Tonnage ('000).
1938-39	9,603	29,977	9,669	30,000
1943-44	4,780	9,393	4,848	9,471
1944-45	4,650	9,615	4,716	9,709
1945-46	4,456	10,562	4,491	10,584
1946-47	5,122	14,181	5,173	14,258
1947-48	5,557	16,246	5,594	16,386

(iv) *Total, States.* The following table shows the number and tonnage of vessels which entered and cleared each State from and for other States during the years 1946-47 and 1947-48, including the interstate movements of oversea vessels :—

TOTAL INTERSTATE SHIPPING OF EACH STATE.

State or Territory.	1946-47.				1947-48.			
	Entered.		Cleared.		Entered.		Cleared.	
	Vessels.	Net Tonnage ('000).	Vessels.	Net Tonnage ('000).	Vessels.	Net Tonnage ('000).	Vessels.	Net Tonnage ('000).
New South Wales	1,394	4,306	1,425	4,220	1,494	4,788	1,562	4,842
Victoria ..	1,483	3,949	1,476	3,980	1,608	4,620	1,602	4,625
Queensland ..	434	1,203	410	1,208	452	1,317	415	1,274
South Australia ..	795	2,596	813	2,669	886	3,061	893	3,126
Western Australia	262	1,196	273	1,241	343	1,472	319	1,437
Tasmania ..	737	895	758	906	757	963	782	1,049
Northern Territory	17	36	18	34	17	25	21	33
Total ..	5,122	14,181	5,173	14,258	5,557	16,246	5,594	16,386

3. *Vessels engaged Solely in Interstate Trade.*—The following table shows the number and net tonnage of vessels engaged solely in interstate trade which entered the ports of each State direct from other States during the years 1946-47 and 1947-48.

VESSELS ENGAGED SOLELY IN INTERSTATE TRADE : NUMBER AND TONNAGE OF VESSELS ENTERED.

State or Territory.	Vessels Entered.			
	1946-47.		1947-48.	
	No.	Net Tonnage ('000).	No.	Net Tonnage ('000).
New South Wales ..	796	1,533	737	1,350
Victoria ..	916	1,196	868	1,078
Queensland ..	211	303	213	311
South Australia ..	415	868	393	765
Western Australia ..	68	170	73	164
Tasmania ..	664	616	645	541
Northern Territory ..	14	28	14	24
Total ..	3,084	4,714	2,943	4,233

4. *Interstate and Coastal Services.*—The following table shows particulars, so far as they are available, of all steamships engaged in regular interstate or coastal services at the end of each of the years 1944 to 1948 compared with the year 1938 :—

INTERSTATE AND COASTAL STEAMSHIP SERVICES IN AUSTRALIA.

Particulars.	1938.	1944.	1945.	1946.(b)	1947.(b)	1948.(b)
Number of companies operating	30	26	25	26	26	25
Number of steamships	167	117	120	158	169	163
Tonnage { Gross	366,182	283,233	287,498	480,089	502,854	478,614
Net	200,131	157,824	160,012	275,921	285,160	271,452
Horse-power (Nominal)	39,598	27,414	27,280	41,210	49,505	43,463
Number of { 1st class	3,909	2,088	2,056	1,808	1,481	1,443
passengers for { 2nd class						
which licensed { and steer- (a)						
age	1,719	961	961	627	366	339
Master and						
Complement of { officers	557	431	446	585	616	634
Crew	606	443	454	644	684	672
{ Engineers						
{ Crew	4,663	3,320	3,384	4,732	4,649	4,544

(a) Excluding purely day passenger accommodation.

(b) Includes vessels under the control of the Australian Shipping Board.

§ 6. Tonnage of Cargo.

1. *Oversea and Interstate Cargo.*—(i) *Australia.* The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped and the tonnage of interstate cargo shipped in all ports for the years 1943-44 to 1947-48 compared with the year 1938-39. Cargo which was stated in cubic feet has been converted to tons measurement on the basis of 40 cubic feet to the ton.

CARGO MOVEMENT : AUSTRALIA.

Year.	Oversea Cargo.				Interstate Cargo.	
	Discharged.		Shipped.		Shipped.	
	Tons Weight. '000.	Tons Meas. '000.	Tons Weight. '000.	Tons Meas. '000.	Tons Weight. '000.	Tons Meas. '000.
1938-39 ..	4,208	2,191	5,138	1,093	7,221	1,731
1943-44 ..	4,138	1,781	3,355	1,702	7,517	1,722
1944-45 ..	4,343	1,797	3,060	1,811	7,666	1,640
1945-46 ..	4,600	1,649	2,462	1,470	6,216	1,213
1946-47 ..	4,171	1,394	3,097	1,357	7,264	1,272
1947-48 ..	4,982	1,916	4,532	1,245	7,109	1,261

(ii) *Principal Ports.* The following table shows the tonnage of oversea and interstate cargo discharged and shipped at principal ports during 1947-48. Comparable figures for the year 1946-47 appear in *Transport and Communication Bulletin* No. 38.

TONNAGE^(a) OF CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS,
1947-48.
(Tons '000.)

Port.	Discharged.			Shipped.		
	Oversea.	Interstate.	Total.	Oversea.	Interstate.	Total.
Sydney	2,230	964	3,194	1,517	550	2,067
Kembla	87	788	875	77	449	526
Newcastle	185	1,356	1,541	304	2,593	2,897
Other .. ..	..	..	..	19	2	21
Total, New South Wales	2,502	3,108	5,610	1,917	3,594	5,511
Melbourne	2,020	2,199	4,219	955	707	1,662
Geelong	204	167	371	421	58	479
Other	22	..	22	9	..	9
Total, Victoria ..	2,246	2,366	4,612	1,385	765	2,150
Brisbane	495	419	914	246	175	421
Cairns	15	39	54	25	159	184
Townsville	58	45	103	110	92	202
Other	31	49	80	88	128	216
Total, Queensland ..	599	552	1,151	469	554	1,023
Adelaide	595	1,155	1,750	442	396	838
Pirie	63	94	157	195	159	354
Walleroo	32	..	32	127	48	175
Whyalla	4	324	328	42	1,915	1,957
Other	29	60	89	200	77	277
Total, South Australia ..	723	1,633	2,356	1,006	2,595	3,601
Fremantle	605	399	1,004	569	70	639
Bunbury	35	..	35	99	52	151
Geraldton	25	..	25	213	11	224
Other	37	17	54	24	18	42
Total, Western Australia	702	416	1,118	905	151	1,056
Hobart	95	401	496	49	294	343
Devonport	9	50	59	4	95	99
Launceston .. ..	..	163	163	24	99	123
Other	2	89	91	4	209	213
Total, Tasmania ..	106	703	809	81	697	778
Darwin (Northern Territory)	20	12	32	14	14	28
Total, AUSTRALIA ..	6,898	8,790	15,688	5,777	8,370	14,147

(a) Tons weight and tons measurement combined.

2. **Nationality.**—The following table shows the total oversea cargo discharged and shipped according to the nationality of the vessels carrying during the years 1943-44 to 1947-48 compared with the year 1938-39:—

TONNAGE(a) OF OVERSEA CARGO DISCHARGED AND SHIPPED.
(Tons '000.)

Vessels Registered at Ports in—	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
British Countries—						
Australia	416	323	305	433	267	286
United Kingdom	7,731	3,358	4,057	4,982	6,957	8,293
Canada	53	242	568	351	121	85
New Zealand	503	375	320	243	233	203
Other British	446	242	260	167	187	425
Total British	9,149	4,540	5,510	6,176	7,765	9,292
Per cent. on Total	72.43	41.37	50.05	60.66	77.51	73.30
Foreign Countries—						
Denmark	184	..	..	22	38	105
France	189	18	43	47	90	95
Germany	370	..	..	..	..	..
Italy	84	..	..	..	37	18
Japan	260	..	..	..	..	..
Netherlands (b)	573	196	193	234	327	512
Norway	834	1,387	911	578	547	566
Sweden	354	415	412	379	314	408
United States of America	159	3,870	3,480	2,286	659	1,083
Other Foreign	475	549	461	459	241	597
Total Foreign	3,482	6,435	5,500	4,005	2,253	3,384
Per cent. on Total	27.57	58.63	49.95	39.34	22.49	26.70
Grand Total	12,631	10,975	11,010	10,181	10,018	12,676

(a) Tons weight and tons measurement combined.

(b) Includes Netherlands East Indies.

Owing to war conditions the percentage of cargo carried in British vessels decreased from 72.43 in 1938-39 to 41.37 in 1943-44, but increased to 77.51 per cent. in 1946-47, although declining to 73.30 per cent. in 1947-48. On the other hand, the percentage of cargo carried on foreign vessels increased from 27.57 in 1938-39 to 58.63 in 1943-44, but decreased to 22.49 in 1946-47, rising again to 26.70 in 1947-48.

§ 7. Control of Shipping.

1. **War-time Control.**—An account of the action taken by the Commonwealth Government to control and regulate shipping throughout Australian waters during the 1939-45 War is given in Official Year Book No. 36, pp. 121-130.

2. **Post-war Control and Developments.**—On 1st January, 1946 the Shipping Co-ordination Regulations were substantially amended to provide for a consolidation, within an Australian Shipping Board, of the war-time shipping authorities, notably the Shipping Control Board, Commonwealth Government Ships Chartering Committee, Central Cargo Control Committee and the Salvage Board. In consequence, a contraction of war emergency shipping administration was effected, with a tapering off of war-time powers and controls being achieved.

The Allied Consultative Shipping Council, the British-American-Australian Shipping sub-committee, and the Port Equipment and Development Committee lapsed towards the end of 1945. The Allied Materials Handling Standing Committee continued, however, developing into the Commonwealth Handling Equipment Pool.

As the immediate post-war years were marked by a continued shortage of coastal shipping, it was necessary not only to continue requisitioning of merchant shipping up to the 18th August, 1947, but to supplement Australian coastal shipping with as many as 26 overseas chartered vessels obtained through the British Ministry of Transport. During these two post-war years, however, the majority of vessels operating under Defence Services Control were returned after refitting for commercial employment, and on 18th August, 1947 all requisitioned vessels, with a few exceptions, had been returned to shipowners.

After the return of requisitioned vessels to private shipowners, the Australian Shipping Board continued to operate Commonwealth-owned shipping, also overseas vessels chartered by the Commonwealth. At 31st May, 1949 the Australian Shipping Board controlled the operation of 38 vessels totalling 169,158 gross tons of which twelve vessels totalling 78,293 gross tons represented chartered shipping. The 90,865 gross tons of Government-owned ships included 13 "A" class vessels of an average of 5,200 gross tons, 8 "D" class vessels of an average of 2,300 gross tons, 3 "E" class vessels of an average of 550 gross tons including *Edenhope* commissioned in May, 1949, also two other vessels—*Nyora* of 1,200 gross tons (formerly the German reparations vessel *Adrian*) and *Corrimal*.

In March, 1949 Federal legislation was enacted providing for the establishment of a Commonwealth Shipping Line which will be managed and operated by a reconstituted Australian Shipping Board of five members. This legislation is designed not only to set up a Commonwealth Shipping Line, but to maintain and develop the Australian merchant fleet and to foster the development of Australia's shipbuilding industry. The defence aspects of an adequate mercantile marine and an efficient shipbuilding industry were prominent factors influencing the introduction of the legislation.

Under the Shipping Act 1949 the Minister for Shipping and Fuel has power to grant licences for the construction of ships for the Commonwealth and has authority to arrange the sale of vessels to private companies at a discount. In addition to licences to build vessels, the Act provides that vessels may not trade on the Australian coast except under licence which, subject to exception in special cases, will be issued only to vessels constructed in Australia and under 24 years of age.

In March, 1947 legislation established a permanent Stevedoring Industry Commission to continue in peace-time the functions performed during the war by the Commission established under National Security legislation. In June, 1949 legislation was enacted to abolish the Stevedoring Industry Commission on which employers and employees were represented, and established in its place a Stevedoring Industry Board of three members which is to attend to administrative matters formerly under the control of the Commission, such as the operation of labour bureaux at ports, payment of attendance money and provision of amenities, etc.

The industrial functions which previously came within the province of the Commission will be dealt with in the future by a single Judge of the Commonwealth Court of Conciliation and Arbitration.

The Maritime Industry Commission established during the war years under National Security legislation continues to function and consideration is being given to its establishment on a permanent basis.

In the international sphere, ratification is being awaited from 21 shipowning nations of a Convention establishing an Inter-Governmental Maritime Consultative Organization within the framework of United Nations. The major objectives of this Organization are to provide machinery for co-operation among Governments with shipping engaged in international trade, and to encourage the removal of discriminatory action and unnecessary restrictions by Governments affecting such shipping.

This Organization is designed to replace the United Maritime Consultative Council which was established on a tentative basis after the expiry of the war-time United Maritime Authority and Combined Adjustment Board.

§ 8. Miscellaneous.

1. **Lighthouses.**—A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light so far as particulars were available was published in *Transport and Communication Bulletin* No. 14.

2. **Distances by Sea.**—The distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia are shown in *Transport and Communication Bulletin* No. 39.

3. **Shipping Freight Rates.**—The *Quarterly Summary of Australian Statistics* shows a list of the ruling freight rates for general merchandise in respect of both overseas and interstate shipments. At 30th September, 1949 the rate for general merchandise from Australia to United Kingdom and Continent was 123s. od. per ton weight or measurement, while the rates for wheat (bagged) and wool (greasy) were respectively 70s. per ton weight and 2.238d. less 7 per cent. per lb. These rates, which are expressed in sterling, are subject to an adjustment of 25½ per cent. when freight is prepaid in Australia.

4. **Depth of Water at Main Ports.**—A table, compiled from information supplied by the Director of Navigation, showing the depth of water available and tides at principal ports of Australia at 1st January, 1949, is included in *Transport and Communication Bulletin* No. 39.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping casualties reported on or near the coast during the years 1944 to 1948 are shown in the table below. This information also was furnished by the Director of Navigation :—

TOTAL SHIPPING CASUALTIES AND LOSSES : AUSTRALIA.

Year ended 31st December—	Total Losses of Vessels.			Total Casualties to Vessels.		
	Number.	Net Tonnage (‘000).	Lives Lost.	Number.	Net Tonnage (‘000).	Lives Lost.
1944	5	16	1	192	498	1
1945	2	4	4	179	432	4
1946 .. ..	..	..	..	173	395	..
1947	2	(a)	..	151	442	10
1948	1	(a)	..	206	652	..

(a) Less than 500 net tons.

6. **Commonwealth Navigation and Shipping Legislation.**—An account in some detail of the Commonwealth navigation and shipping legislation is contained in *Official Year Book* No. 17 (pp. 1053–5).

Under the provisions of the Navigation Act the coasting trade of Australia in passengers and cargo is reserved by Section 288 to ships licensed to engage in that trade. Licences are granted to ships complying with Australian conditions respecting wages, manning, crew accommodation, and so on, stipulations which have confined the trade to Australian-owned vessels.

Provision was made in the Act for permits to be granted to unlicensed British ships to carry cargo and passengers on the coast when it was shown that the licensed service was inadequate. The permit system, however, was not entirely satisfactory and in 1926 the Act was amended to allow the Governor-General, by notice in the *Gazette*, to permit unlicensed British ships of a specified size and speed to engage in the passenger trade between particular ports. Such a permit, however, could only be granted when it was shown that the tourist traffic was being injured or retarded. By a further amendment

in 1935, this concession was revised to permit unlicensed British ships of not less than 10,000 tons and a sea speed of not less than 14 knots to carry passengers between any two ports in Australia not connected by rail. In every case the voyage must be made in one ship without break of journey, transshipment, or second call at any intermediate port. On arriving at the port of destination the passenger may be taken on to the next port of call of the ship, which may be his first port of embarkation, or a further port not connected by rail.

In the Navigation Act of 1935, also, the provision for the carriage of wireless equipment was extended to all ships engaged in interstate trade. A similar provision for intra-state vessels has been made by some of the States.

The Navigation (Maritime Conventions) Act of 1934 was an amendment of the Navigation Act to enable the Commonwealth to give effect to the provisions of a number of maritime conferences of recent years, of which the most important were those dealing with the safety of life at sea and load lines.

The war-time and post-war control of shipping is referred to in § 7 *ante*.

7. **Ports and Harbours.**—A report in two volumes on "Transport in Australia," with special reference to Ports and Harbours facilities, was submitted to the Commonwealth Government by Sir George Buchanan, and published as two Parliamentary Papers (No. 86 printed 14th March, 1927, and No. 108 printed 9th May, 1927).

B. RAILWAYS.

§ 1. General.

1. **Introduction.**—The policy of Government ownership and control of railways has been adopted in each State and at 30th June, 1948 only 648 route-miles of the 27,771 open for general traffic in Australia were privately owned, while 24,922 route-miles and 2,201 route-miles were owned by the State Governments and the Commonwealth respectively. In the following tables details of the four lines owned by the Commonwealth are grouped and shown with the totals for the various State-owned systems. Separate particulars for each Commonwealth line are shown in *Transport and Communication Bulletin* No. 39, issued by this Bureau, and also in *Official Year Book* No. 31, p. 125, et seq.

2. **Railway Communication in Australia.**—An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in *Official Year Book* No. 6, p. 681. Further information regarding railway communication in Australia is given in *Official Year Book* No. 22, pp. 259–61.

3. **Standardization of Railway Gauges.**—A summary of the report and recommendations relating to the standardization of Australia's railway gauges on the basis of a 4 ft. 8½ in. gauge, made at the request of the Commonwealth Government by Sir Harold Clapp, Director-General of Land Transport, Commonwealth Department of Transport, is contained in *Official Year Book* No. 37, together with an outline of the agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia regarding the standardization of railway gauges in their respective States (Chapter V.—Transport and Communication, pp. 146–9). The agreement was ratified by the Governments of the Commonwealth, of Victoria and of South Australia, but not by the New South Wales Government. After some time had elapsed and New South Wales had failed to ratify the agreement, the Commonwealth Government decided to enter into a separate agreement with South Australia, and the necessary legislation has been enacted by each Government concerned. Action has also been taken to invite the Victorian Government to discuss the subject of a separate agreement. The Commonwealth–South Australia Agreement provides for the same standardization

work to be carried out in South Australia as would have been carried out had New South Wales ratified the original Commonwealth—Three States Agreement, and that over a period of years the Commonwealth should contribute 70 per cent. and South Australia be responsible for the remaining 30 per cent. of the estimated cost of £24,000,000.

4. Government Railways. Lines under Construction and Lines Authorized, 1947-48.—

(i) *Lines under Construction.* In spite of the great extensions of State railways since 1875 and also the construction of various railways by the Commonwealth Government, there are still, in some States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States was to extend the existing lines inland in the form of light railways as settlement increased, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting was kept in view.

(a) *New South Wales.* Construction work proceeded during 1947-48 on the Sandy Hollow to Maryvale line (approximately 147 miles) and on the connecting link between St. James and Wynyard stations of the underground railway of Sydney. In connexion with the eastern, southern and south-eastern suburban electric railways, detailed surveys and preliminary plans were undertaken during the year for locations of tracks; also general arrangements for various stations together with boring operations to ascertain the class of strata that would be encountered in the underground work. The duplication of track on the main Southern line between Cootamundra and Junee made substantial progress and work was vigorously prosecuted in the stages on the comprehensive long-range scheme for the provision of additional track accommodation on the main Western line between Lidcombe and Penrith. The proposed new railway line (Inverell to Iluka, 152 miles) involving considerable exploratory surveys, and plans and sections of the first 30 miles were compiled during the year.

(b) *Other.* At 30th June, 1948 no construction work on new lines was in progress in Victoria, Queensland, South Australia, Western Australia, Tasmania, nor for the Commonwealth Government.

(ii) *Lines Authorized for Construction.* In the States of New South Wales, Victoria, Queensland, South Australia and Western Australia at the 30th June, 1948 there were certain lines authorized for construction but not commenced. These lines were authorized many years ago, some as early as 1910 and none later than 1933. Particulars may be found in Official Year Book No. 36, p. 133. There have been no later authorizations.

5. *Grafton-South Brisbane (Uniform Gauge) Line.*—The 4 ft. 8½ in. gauge line from Grafton (New South Wales) to Brisbane (Queensland) which was opened for traffic on 27th September, 1930, was constructed under agreement between the Commonwealth and the States of New South Wales and Queensland to overcome the break of gauge between Sydney and Brisbane; and was the first step towards uniform gauge railway communication between the capitals of the mainland States. To 30th June, 1948 the capital cost of construction and equipment was £4,362,500. The working of the line is the responsibility of the New South Wales and Queensland Railway Commissioners, and figures relating to its operations, etc., are incorporated as far as possible with those for New South Wales and Queensland in the tables which follow. Further particulars of the construction of the line will be found in Official Year Book, No. 31, p. 122, and later issues.

6. *Mileage Open for Traffic, all Lines.*—(i) *General.* Almost all the railways open for general traffic in Australia are owned and controlled by the State or Commonwealth Governments. Private lines have been laid down for the purpose of opening up forest lands, mining districts or sugar areas. These lines are not generally used for the conveyance of passengers or the public conveyance of goods, and it should be understood that the private lines included in the tables below form only a small part of all private railways in Australia.

The following table shows the route-mileage of Commonwealth, State and private lines open for general traffic in each State at different periods since the inauguration of railways in Australia in 1854 up to the year 1947-48 :—

GOVERNMENT AND PRIVATE RAILWAYS : MILEAGE OPEN.
(Miles.)

Year.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1855 ..	14	2	..	7	..	..	..	..	23
1861 ..	73	114	..	56	..	..	..	..	243
1881 ..	358	276	218	133	12	45	..	..	1,042
1881 ..	1,040	1,247	800	845	92	168	..	..	4,192
1890-91 ..	2,263	2,763	2,205	1,666	656	425	145	..	10,123
1900-01 ..	2,926	3,238	2,904	1,736	1,984	618	145	..	13,551
1910-11 ..	4,027	3,574	4,390	1,993	3,208	675	145	..	18,012
1920-21 ..	5,402	4,337	7,013	3,463	4,906	877	199	5	26,202
1930-31 ..	6,160	4,742	6,795	3,932	4,911	806	317	5	27,668
1940-41 ..	6,196	4,784	6,750	3,861	5,112	758	490	5	27,956
1943-44 ..	6,194	4,761	6,750	3,848	5,112	758	490	5	27,918
1944-45 ..	6,182	4,761	6,702	3,850	5,112	759	490	5	27,861
1945-46 ..	6,182	4,761	6,702	3,850	5,112	759	490	5	27,861
1946-47 ..	6,182	4,761	6,702	3,850	5,079	758	490	5	27,827
1947-48 ..	6,182	4,738	6,696	3,850	5,079	731	490	5	27,771

(ii) *Government and Private Lines Separately.* The next table shows for each State (a) the length of lines open for traffic owned by the State Government, and by the Commonwealth Government in that State and ; (b) the length of private lines available for general use by the public :—

GOVERNMENT AND PRIVATE RAILWAYS : MILEAGE CLASSIFIED, 1947-48.
(Miles.)

State or Territory.	Government Lines—		Private Lines available for General Traffic.	Total Open for General Traffic.
	State.	Commonwealth.		
New South Wales ..	6,128	..	54	6,182
Victoria ..	4,725	..	13	4,738
Queensland ..	6,560	..	136	6,696
South Australia ..	2,547	1,252	51	3,850
Western Australia ..	4,348	454	277	5,079
Tasmania ..	614	..	117	731
Northern Territory ..	..	490	..	490
Aust. Cap. Territory ..	..	5	..	5
 Australia ..	 24,922	 2,201	 648	 27,771

7. *Comparative Railway Facilities.*—The mileage of lines open to the public for general traffic (including both Government and private lines) is shown in the following statement in relation to both population and area at 30th June, 1948 :—

GOVERNMENT AND PRIVATE RAILWAYS : COMPARISON OF FACILITIES,
1947-48.
(Miles.)

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Mileage of Railway—									
Per 1,000 of population ..	2.06	2.29	6.02	5.90	9.99	2.79	43.52	0.29	3.63
Per 1,000 sq. miles of Territory ..	19.97	53.91	9.99	10.12	5.20	27.88	0.94	5.32	9.33

8. Classification of Lines according to Gauge, 1947-48.—The next table shows a classification according to gauge of the route-mileage open of (a) Commonwealth railways, according to the State or Territory in which situated; (b) State railways; and (c) Private railways open to the public for general traffic. Particulars of Government railways are up to 30th June, 1948, and of private railways open for general traffic to 31st December, 1947, as nearly as possible.

GOVERNMENT AND PRIVATE RAILWAYS : GAUGES, 1947-48.

(Miles.)

State or Territory in which situated.	Route-mileage having a gauge of—					Total
	3 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	2 ft. 6 in.	2 ft. 0 in.	
COMMONWEALTH RAILWAYS.						
South Australia	654	598	..	..	1,252
Western Australia	454	..	..	..	454
Northern Territory	490	..	..	490
Aust. Cap. Territory	5	..	..	..	5
Total	1,113	1,088	..	..	2,201

STATE RAILWAYS.

New South Wales ..	2	6,126	..	..	..	6,128
Victoria ..	4,611	..	..	114	..	4,725
Queensland ..	..	69	6,461	..	30	6,560
South Australia ..	1,480	..	1,067	..	..	2,547
Western Australia ..	..	..	4,348	..	..	4,348
Tasmania ..	..	..	614	..	..	614
Total ..	6,093	6,195	12,490	114	30	24,922

PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.

New South Wales ..	..	17	37	..	..	54
Victoria ..	13	..	..	..	..	13
Queensland ..	..	..	50	..	86	136
South Australia ..	..	..	51	..	..	51
Western Australia ..	..	..	277	..	..	277
Tasmania ..	..	..	110	..	7	117
Total ..	13	17	525	..	93	648

ALL RAILWAYS OPEN FOR GENERAL TRAFFIC.

New South Wales ..	2	6,143	37	..	..	6,182
Victoria ..	4,624	..	..	114	..	4,738
Queensland ..	..	69	6,511	..	116	6,696
South Australia ..	1,480	654	1,716	..	..	3,850
Western Australia ..	..	454	4,625	..	..	5,079
Tasmania ..	..	..	724	..	7	731
Northern Territory ..	..	..	490	..	..	490
Aust. Cap. Territory ..	..	5	..	..	..	5
GRAND TOTAL	6,106	7,325	14,103	114	123	27,771

9. Summary of Operations, 1947-48.—In the following table a summary is shown of the working of all railways open for general traffic in Australia during the year ended 30th June, 1948:—

GOVERNMENT AND PRIVATE RAILWAYS: SUMMARY OF OPERATIONS, 1947-48.

Particulars.	Commonwealth Railways.	State Railways.	Private Railways.(a)	Total for Australia.
Mileage open (route) 30th June, 1948				
miles	2,201	24,922	648	27,771
Capital cost £'000	18,498	326,132	5,198	349,828
Cost per mile £	8,404	13,086	8,022	12,597
Gross revenue £'000	1,237	76,159	946	78,342
" " per train-mile .. d.	185.33	212.25	207.15	211.70
Working expenses £'000	1,439	69,828	754	72,021
" " per train-mile .. d.	215.59	194.60	165.11	194.62
Net revenue £'000	—202	6,331	192	6,321
" " per train-mile .. d.	—30.26	17.65	42.04	17.08
Train-miles run miles '000	1,602	86,117	1,096	88,815
Passenger-journeys No. '000	217	510,551	1,225	511,993
Tons of goods, etc., carried .. tons '000	423	39,715	3,416	43,554
Average number of employees .. No. (b)	2,348	(b)130,962	(c) 1,339	134,649
" earnings per employee .. £	399	418	409	417

(a) Incomplete. Full particulars not available for all items.

(b) Excludes construction staff.

(c) Employees at 31st December, 1948.

Details shown above relating to capital cost do not include particulars of amounts totalling about £61.5 million written off during the period 1st July, 1927 to 1st July, 1937. If these are taken into account, the cost per mile for State Railways is increased to £15,554 and for all railways to £14,813.

§ 2. Government Railways.

1. Cost of Construction and Equipment.—The following table shows particulars of the mileage open and the capital cost of Government railways in Australia. The cost shown for Australia (£344,630,000) does not represent the total expenditure on construction and equipment, as legislation was introduced in Victoria, Queensland, South Australia and Tasmania, for the purpose of reducing the capital indebtedness of the railways. Figures relating to capital cost do not include charges for works in the course of construction, surveys, and discounts and flotation charges on loans allocated to the railways.

GOVERNMENT RAILWAYS: MILEAGE AND COST TO 30th JUNE, 1948.

System.	Mileage Open.		Total Cost of Construction and Equipment.	Average Cost per Route-Mile Open.	Cost per Head of Population.	Route-Mileage per 1,000 of Population.
	Route.	Track.				
	Miles.	Miles.	£'000.	£	£	Miles.
New South Wales	6,128	8,384	165,839	27,063	54.15	2.00
Victoria (a) ..	4,725	6,096	54,434	11,520	25.84	2.24
Queensland (a) ..	6,560	7,478	41,506	6,327	36.65	5.79
South Australia (a)	2,547	3,139	31,478	12,359	47.27	3.82
Western Australia	4,348	4,811	27,497	6,324	52.64	8.32
Tasmania (a) ..	614	666	2,931	4,773	10.65	2.23
Commonwealth ..	2,201	2,358	18,498	8,404	..	..
Australia (a) ..	27,123	32,932	(b)344,630	12,706	44.21	3.48

(a) See following paragraph.
Line, £2,446,972.

(b) Includes Commonwealth proportion Grafton-South Brisbane

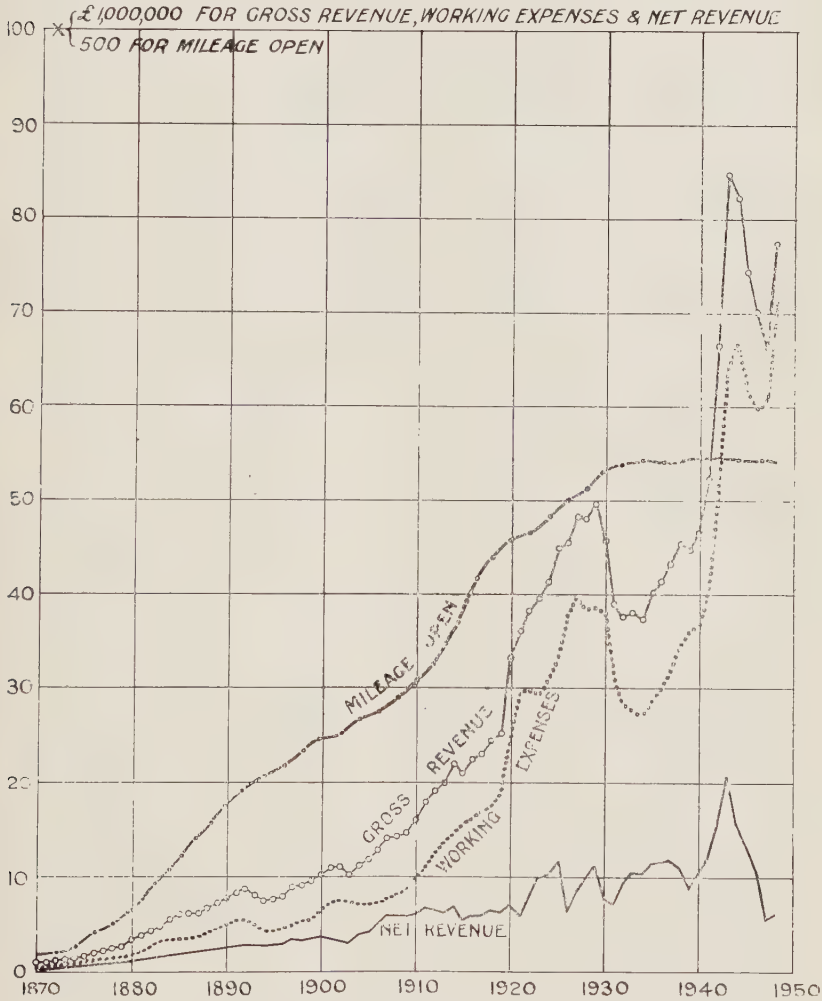
The reductions made in the capital indebtedness referred to above were:—Victoria, £25,684,423; Queensland, £28,000,000; South Australia, £3,088,986; and Tasmania, £4,738,000. After adding these figures to the capital costs of the respective States and

RAILWAY SYSTEMS - AUSTRALIA 1947.

Showing existing lines, & new lines, & conversions recommended in Proposals A, B & C of the Clapp Report, 1945, & those authorized in the Railway Standardization Act, 1946 in respect of the Commonwealth, New South Wales, Victoria & South Australia.
(See letterpress)



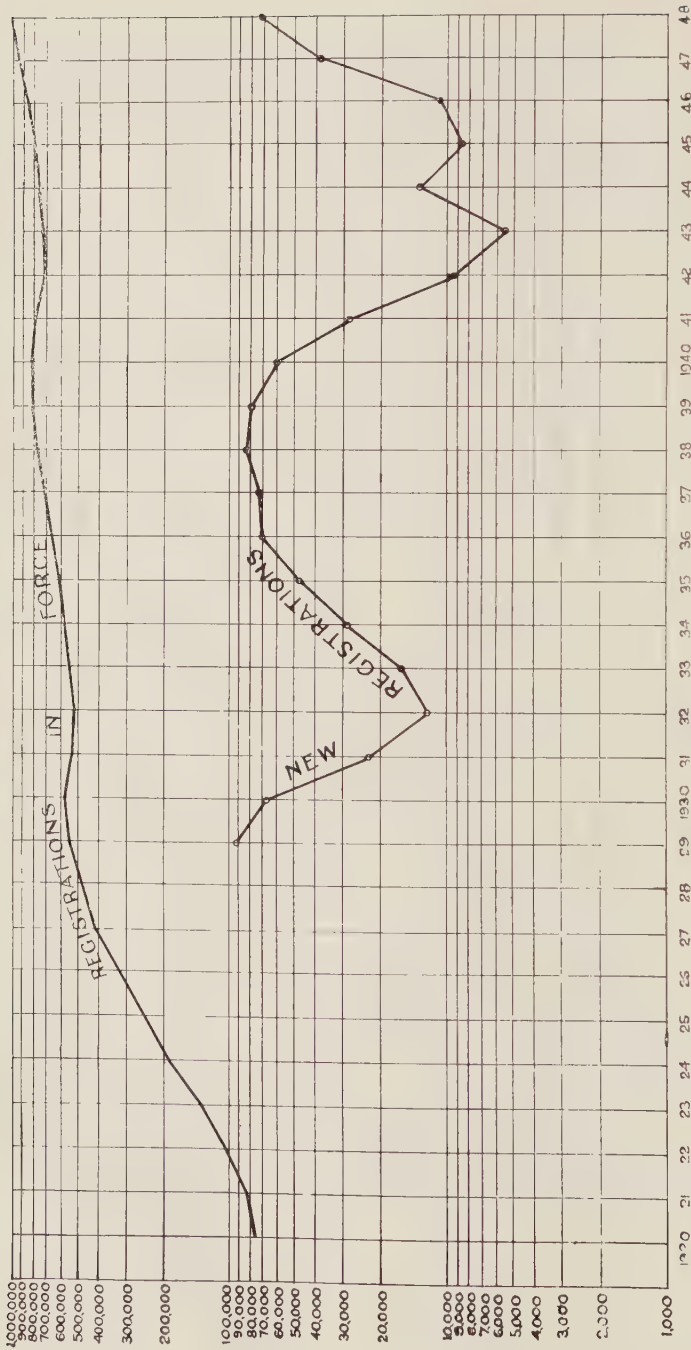
FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1948.



EXPLANATION.—The base of each square represents throughout ten years. The significance of the vertical height of each square varies according to the nature of the several curves.

In the curves for (i) gross revenue ; (ii) working expenses ; and (iii) net revenue, the vertical side of each square represents £10,000,000. The mileage open is shown by a broken line, the vertical side of each square representing 5,000 miles.

MOTOR VEHICLE REGISTRATION—AUSTRALIA, 1920 TO 1948.



(See pages 192-4.)

EXPLANATION.—This is a ratio graph, the vertical scale being logarithmic, and the curves rise and fall according to the rate of increase or decrease. Actual numbers are indicated by the scale at the side of the graph.

The graphs show for all motor vehicles other than motor cycles the registrations in force at 30th June each year and the number of new registrations during the year.

adjusting the route-mileage for New South Wales and Queensland to exclude portions of the Grafton-South Brisbane Line, the cost per route-mile open in each State and for the Commonwealth railways is as follows:—New South Wales, £27,063; Victoria, £16,956; Queensland, £10,708; South Australia, £13,572; Western Australia, £6,324; Tasmania, £12,490; Commonwealth, £8,404; and for all Government railways in Australia, £14,974. The lowest average cost is in Western Australia, and the highest is in New South Wales. Very few engineering difficulties were encountered in Western Australia, and the fact that contractors were permitted to carry traffic during the term of their contract considerably reduced expenditure.

Adjusted figures for the cost per head of population for each State and for Australia are as follows:—New South Wales, £54.15; Victoria, £38.04; Queensland, £61.38; South Australia, £51.90; Western Australia, £52.64; Tasmania, £27.88; all Government railways in Australia, £52.10.

2. **Expenditure on Construction and Equipment from Revenue and from Loans.**—The following table shows particulars of the expenditure on construction and equipment from revenue and from loans:—

**GOVERNMENT RAILWAYS: CAPITAL EXPENDITURE FROM REVENUE
AND FROM LOANS.**
(£'000.)

System.	Expenditure from Revenue to 30th June, 1948.	Net Loan Expenditure.			
		1938-39.	1946-47.	1947-48.	Total to 30th June, 1948.
New South Wales ..	640	2,002	3,103	5,543	170,649
Victoria ..	(a) 6,561	(b) 354	(b) 434	(b) 479	(b) 81,116
Queensland ..	..	490	401	706	68,642
South Australia ..	..	261	558	510	38,954
Western Australia ..	632	(c) 195	264	284	26,415
Tasmania ..	..	35	198	307	(d) 8,513
Commonwealth ..	3,642	..	Cr., 2	Cr. 5	11,317
Australia ..	11,475	3,337	4,956	7,824	(e) 408,051

(a) From proceeds of sale of State lands, Consolidated Revenue Fund, National Recovery Loan, etc.
(b) Gross loan expenditure. (c) Includes expenditure on railways provided in Unemployment Relief work programmes. (d) Includes losses funded. (e) Includes £2,444,681 Commonwealth loan expenditure on Grafton-South Brisbane Line.

3. **Gross Revenue.**—(i) *General.* The total revenue from all sources, the revenue per average mile worked and the revenue per train-mile run during the years 1943-44 to 1947-48 in comparison with 1938-39 were as follows:—

GOVERNMENT RAILWAYS: GROSS REVENUE.

Year.	N.S.W.(a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
TOTAL GROSS REVENUE. (£'000.)								
1938-39 ..	19,940	9,284	7,798	3,119	3,599	487	547	44,780
1943-44 ..	35,301	15,882	16,430	5,979	4,387	871	3,459	82,309
1944-45 ..	32,377	15,259	13,809	5,460	4,276	900	2,424	74,505
1945-46 ..	32,113	14,675	11,917	4,871	4,107	928	1,565	70,176
1946-47 ..	31,153	13,577	11,033	4,593	4,046	893	1,099	66,394
1947-48 ..	37,706	16,322	11,532	5,079	4,562	958	1,237	77,396

(a) Includes £800,000 per annum contribution from consolidated revenue towards losses on working of country developmental lines. (b) Includes the following recoups by the Treasury—1938-39, £10,000 guarantee in respect of losses on certain lines; and in 1943-44, 1944-45, 1945-46, 1946-47 and 1947-48 £313,700, £282,300, £147,500, £49,500 and £18,100, respectively, being recoups of losses resulting from reduction in suburban fares, etc. and Defence Force fare concessions.

GOVERNMENT RAILWAYS: GROSS REVENUE—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
GROSS REVENUE PER AVERAGE ROUTE-MILE WORKED. (£.)								
1938-39 ..	3,263	1,953	1,188	1,220	822	740	248	1,645
1943-44 ..	5,761	3,345	2,502	2,348	1,001	1,357	1,572	3,025
1944-45 ..	5,283	3,214	2,103	2,143	976	1,402	1,101	2,738
1945-46 ..	5,241	3,091	1,815	1,912	937	1,445	711	2,579
1946-47 ..	5,084	2,859	1,680	1,803	931	1,393	499	2,443
1947-48 ..	6,153	3,454	1,758	1,994	1,049	1,560	562	2,854

GROSS REVENUE PER TRAIN-MILE RUN.
(d.)

1938-39 ..	159.01	124.54	134.38	121.19	131.38	61.30	145.42	138.70
1943-44 ..	228.36	232.23	199.21	211.75	174.20	95.66	240.46	215.27
1944-45 ..	199.76	224.15	188.59	197.99	160.30	98.13	239.83	198.18
1945-46 ..	202.81	215.49	183.25	183.99	156.33	99.84	206.70	194.35
1946-47 ..	199.38	200.00	164.01	183.42	147.20	95.44	174.41	186.27
1947-48 ..	232.29	232.90	185.96	198.73	153.99	103.95	185.33	211.76

(ii) *Coaching, Goods and Miscellaneous Receipts.* (a) *Totals.* The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and live stock; and (c) rents and miscellaneous items. The following table shows the gross revenue for 1938-39 and 1943-44 to 1947-48 classified according to the three chief sources of receipts. The total of the three items specified has already been given in the preceding paragraph.

GOVERNMENT RAILWAYS: COACHING, GOODS AND MISCELLANEOUS
RECEIPTS.
(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
COACHING TRAFFIC RECEIPTS.								
1938-39 ..	6,877	4,286	2,057	754	704	152	194	15,024
1943-44 ..	12,867	7,174	4,861	1,671	1,426	310	940	29,249
1944-45 ..	12,305	7,171	4,332	1,646	1,375	320	(c) 797	c 27,946
1945-46 ..	13,362	7,413	4,145	1,574	1,324	334	656	28,808
1946-47 ..	11,584	6,359	3,034	1,267	1,069	280	407	24,000
1947-48 ..	13,009	7,125	2,941	1,286	1,102	256	435	26,154
GOODS AND LIVE STOCK TRAFFIC RECEIPTS.								
1938-39 ..	10,356	4,276	5,474	2,144	2,807	318	224	25,594
1943-44 ..	18,408	7,485	10,842	3,720	2,789	516	2,434	46,194
1944-45 ..	16,138	6,863	8,823	3,382	2,759	528	(c) 1,047	c 39,540
1945-46 ..	14,739	6,058	7,226	2,889	2,674	563	803	34,952
1946-47 ..	14,326	6,109	7,526	2,947	2,810	581	580	34,879
1947-48 ..	19,804	7,992	8,119	3,380	3,160	664	675	43,794

MISCELLANEOUS RECEIPTS.

	(a)	(b)						
1938-39 ..	2,713	722	266	222	88	17	129	4,157
1943-44 ..	4,026	1,223	727	588	172	45	85	6,866
1944-45 ..	3,934	1,225	654	432	142	52	(c) 79	(c) 6,518
1945-46 ..	4,012	1,204	546	408	109	31	106	6,416
1946-47 ..	5,243	1,109	473	379	167	32	112	7,515
1947-48 ..	4,893	1,205	472	413	300	38	127	7,448

(a) See note (a) to Gross Revenue table above. (b) See note (b) to Gross Revenue table above.
(c) Excludes particulars of North Australia Commonwealth Railway.

(b) *Percentages.* The following table shows for each of the years 1946-47 and 1947-48 the percentage which each class of receipts bears to the total gross revenue :—

GOVERNMENT RAILWAYS : PERCENTAGES OF RECEIPTS.

(Per cent.)

System.	1946-47.			1947-48.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
New South Wales ..	37.18	45.99	16.83	34.50	52.52	12.98
Victoria ..	46.84	44.99	8.17	43.65	48.97	7.38
Queensland ..	27.50	68.22	4.28	25.50	70.40	4.10
South Australia ..	27.59	64.15	8.26	25.32	66.55	8.13
Western Australia ..	26.43	69.45	4.12	24.16	69.26	6.58
Tasmania ..	31.34	65.06	3.60	26.70	69.35	3.95
Commonwealth ..	37.06	52.77	10.17	35.14	54.54	10.32
Australia ..	36.15	52.53	11.32	33.79	56.58	9.63

4. *Working Expenses.*—(i) *General.* In order to make an adequate comparison of the working expenses, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the different systems of the State and Commonwealth railways, but also on different portions of the same systems. When traffic is light, the percentage of working expenses is naturally greater than when traffic is heavy ; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

During the war years large amounts were set aside by the Railways as reserves, mainly to provide for depreciation and accrued leave, to be expended as circumstances permit. War conditions subjected the Railways to heavy demands, and shortages in man-power and materials rendered it impossible to deal with the resulting rapid deterioration of stock, tracks and works. Leave accrued because shortages in staff prevented the taking of annual leave. The railway authorities therefore took the opportunity, which increased revenues offered, to provide for these future commitments. Particulars of the amounts thus set aside by each State during the years 1940-41 to 1945-46 are shown in the following table. These amounts are included in the maintenance of Way and Works and Rolling Stock sections following. Prior to 1940-41 comparatively small amounts aggregating £500,000 per annum were set apart for this purpose. Subsequently to 1945-46 this practice has been reverted to and nominal amounts only set apart each year for depreciation, etc.

GOVERNMENT RAILWAYS : RESERVES MAINLY FOR DEPRECIATION AND ACCRUED LEAVE.

(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
1940-41 ..	1,215	625	125	25	..	100	..	2,090
1941-42 ..	2,403	1,651	710	170	12	100	150	5,196
1942-43 ..	5,214	2,485	1,707	81	80	90	100	9,757
1943-44 ..	3,509	1,272	2,279	112	96	112	100	7,480
1944-45 ..	1,129	919	465	108	36	152	..	2,809
1945-46 ..	..	504	..	108	36	125	..	773

The following table shows the total annual expenditure, the percentage thereof on gross revenue, and the expenditure per average mile worked and per train-mile run for the years 1943-44 to 1947-48 in comparison with 1938-39 :—

GOVERNMENT RAILWAYS : WORKING EXPENSES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia
TOTAL WORKING EXPENSES. (£'000.)								
1938-39 ..	14,543	8,060	6,193	2,931	2,911	678	642	35,958
1943-44 ..	27,535	13,214	13,163	5,213	3,796	1,136	2,521	66,578
1944-45 ..	24,673	12,833	11,675	5,146	3,764	1,167	2,113	61,371
1945-46 ..	24,934	12,531	10,425	5,107	4,027	1,209	1,502	59,735
1946-47 ..	25,886	12,916	10,191	5,045	4,424	1,253	1,224	60,939
1947-48 ..	31,015	15,225	10,641	5,947	5,545	1,455	1,439	71,267

PERCENTAGE WORKING EXPENSES ON GROSS REVENUE.

	(Per cent.)							
1938-39 ..	72.91	86.82	79.42	93.97	80.90	139.18	117.43	80.30
1943-44 ..	78.00	83.20	80.12	87.18	86.54	130.46	72.87	80.89
1944-45 ..	76.21	84.10	84.55	94.24	88.03	129.65	87.16	82.36
1945-46 ..	77.64	85.39	87.49	104.86	98.05	130.34	95.96	85.12
1946-47 ..	83.09	95.13	92.37	109.85	109.34	140.37	111.35	91.78
1947-48 ..	82.85	93.28	92.27	117.09	121.54	151.87	116.33	92.08

WORKING EXPENSES PER AVERAGE ROUTE-MILE WORKED.

	(£.)							
1938-39 ..	2,378	1,695	943	1,146	665	1,030	292	1,321
1943-44 ..	4,493	2,783	2,005	2,047	866	1,770	1,145	2,447
1944-45 ..	4,026	2,703	1,778	2,020	859	1,804	960	2,255
1945-46 ..	4,069	2,639	1,588	2,005	919	1,883	682	2,195
1946-47 ..	4,224	2,720	1,552	1,981	1,017	1,955	556	2,242
1947-48 ..	5,061	3,222	1,622	2,335	1,275	2,369	654	2,628

WORKING EXPENSES PER TRAIN-MILE RUN.

	(d.)							
1938-39 ..	115.93	108.13	106.72	113.88	106.28	85.31	170.77	111.38
1943-44 ..	178.13	193.21	159.60	184.61	150.74	124.80	175.21	174.12
1944-45 ..	152.22	188.51	159.45	186.59	146.40	126.27	209.04	163.22
1945-46 ..	157.47	184.01	160.32	192.93	153.28	130.13	198.35	165.44
1946-47 ..	165.67	199.48	151.49	201.48	161.02	133.97	194.20	170.97
1947-48 ..	191.07	217.25	171.59	232.70	187.16	157.87	215.59	194.99

(ii) *Distribution.* The following table shows the distribution of working expenses under the chief four heads of expenditure for the years 1938-39 and 1943-44 to 1947-48 :—

GOVERNMENT RAILWAYS : DISTRIBUTION OF WORKING EXPENSES.

	(£'000.)							
Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
MAINTENANCE OF WAY AND WORKS.(a)								
1938-39 ..	2,972	1,374	1,602	503	667	129	245	7,492
1943-44 ..	5,948	2,623	2,930	924	761	201	746	14,133
1944-45 ..	4,697	2,395	2,414	810	709	192	640	11,857
1945-46 ..	4,732	2,467	2,131	778	736	212	438	11,494
1946-47 ..	4,399	2,413	2,053	710	800	212	315	10,902
1947-48 ..	5,228	2,698	2,281	777	910	244	355	12,493
ROLLING STOCK.(a)								
1938-39 ..	5,622	2,801	2,695	1,389	1,321	373	251	14,452
1943-44 ..	11,360	4,927	6,639	2,513	1,769	522	1,394	29,124
1944-45 ..	10,059	4,710	5,804	2,544	1,793	533	1,161	26,604
1945-46 ..	9,478	4,533	4,974	2,519	1,932	552	800	24,788
1946-47 ..	9,862	4,242	4,764	2,447	2,047	538	651	24,551
1947-48 ..	11,734	5,298	4,840	2,934	2,625	630	771	28,832

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES

—continued.

(£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
TRANSPORTATION AND TRAFFIC.								
1938-39 ..	3,502	2,254	1,533	632	779	151	101	9,002
1943-44 ..	5,598	2,960	2,742	1,180	932	205	333	13,950
1944-45 ..	5,440	3,095	2,632	1,199	935	208	258	13,767
1945-46 ..	5,926	3,044	2,504	1,217	1,008	226	193	14,118
1946-47 ..	6,276	3,255	2,550	1,272	1,205	239	177	14,974
1947-48 ..	7,620	4,105	2,706	1,553	1,383	285	216	17,868

OTHER CHARGES.

1938-39 ..	2,448	1,630	363	357	144	24	45	5,011
1943-44 ..	4,629	2,704	852	596	334	208	48	9,371
1944-45 ..	4,477	2,633	825	593	327	234	54	9,143
1945-46 ..	4,798	2,487	816	593	351	219	71	9,335
1946-47 ..	5,349	3,006	824	616	372	264	81	10,512
1947-48 ..	6,433	3,124	814	683	627	296	97	12,074

(a) See par. 4 (i) ante.

5. Net Revenue.—The following table shows the net earnings, i.e., the excess of gross earnings over working expenses, and the amount of such net earnings per average mile worked and per train-mile run for the years 1943-44 to 1947-48 in comparison with 1938-39 :—

GOVERNMENT RAILWAYS: NET REVENUE.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
NET REVENUE.								
(£'000.)								
1938-39 ..	5,403	1,224	1,005	183	688	-101	-95	8,822
1943-44 ..	7,766	2,668	3,267	766	591	-265	938	15,731
1944-45 ..	7,704	2,426	2,134	314	512	-267	311	13,134
1945-46 ..	7,180	2,144	1,491	-237	80	-281	63	10,440
1946-47 ..	5,267	661	842	-452	-378	-360	-125	5,455
1947-48 ..	6,691	1,097	891	-868	-983	-497	-202	6,129

NET REVENUE PER AVERAGE ROUTE-MILE WORKED.

(£).

1938-39 ..	884	257	244	74	157	-290	-43	324
1943-44 ..	1,267	562	498	301	135	-413	426	578
1944-45 ..	1,257	511	325	123	117	-402	141	483
1945-46 ..	1,172	452	227	-93	18	-438	29	384
1946-47 ..	860	139	128	-178	-86	-562	-57	201
1947-48 ..	1,092	232	136	-341	-226	-809	-92	226

NET REVENUE PER TRAIN-MILE RUN.

(d.)

1938-39 ..	43.08	16.42	27.66	7.31	25.10	-24.01	-25.35	27.33
1943-44 ..	50.24	39.02	39.61	27.14	23.45	-29.14	65.25	41.14
1944-45 ..	47.54	35.64	29.14	11.40	19.90	-28.14	30.79	34.96
1945-46 ..	45.34	31.48	22.93	-8.94	3.05	-30.29	8.35	28.91
1946-47 ..	33.71	10.21	12.52	-18.06	-13.76	-38.53	-19.79	15.30
1947-48 ..	41.22	15.05	14.37	-33.97	-33.17	-53.92	-30.26	16.77

In the graphs accompanying this Chapter the gross and net revenue and working expenses are shown from 1870 to 1948.

6. **Interest.**—The interest payments on expenditure from loans for the construction and equipment of the Government railways in Australia during the years 1938-39 and 1943-44 to 1947-48 were as follows:—

**GOVERNMENT RAILWAYS: INTEREST PAYMENTS ON RAILWAY LOAN
EXPENDITURE.**
(£'000.)

Year.	N.S.W. (a)	Victoria. (b)	Q'land. (a) (b)	S. Aust. (b)	W. Aust.	Tasmania. (b)	C'wealth.	Australia. (a)
1938-39 ..	5,360	1,860	1,642	1,075	1,001	80	395	11,540
1943-44 ..	5,328	1,902	1,579	1,074	1,043	89	363	11,505
1944-45 ..	5,350	1,903	1,592	1,072	1,051	96	356	11,547
1945-46 ..	5,240	1,902	1,480	1,054	1,040	97	341	11,265
1946-47 ..	5,126	1,840	1,440	1,013	1,033	100	338	10,972
1947-48 ..	5,145	1,862	1,431	1,001	1,046	112	317	10,996

(a) Includes interest charges on the Grafton-South Brisbane Line, which for 1943-44 to 1944-45 amounted annually to £225,939 and were contributed by New South Wales, £72,179; Queensland, £27,029; and the Commonwealth, £126,731. During 1945-46 the annual interest charge was reduced to £108,638 and was contributed by New South Wales, £63,457; Queensland, £23,763; and the Commonwealth, £111,418. During 1946-47 and 1947-48 the annual interest charge was further reduced to £146,860, New South Wales, £46,916, Queensland £17,569, Commonwealth £82,375. (b) Capital indebtedness reduced by legislation in these four States. See par. 1, p. 168.

The interest payable on the cost of construction and equipment as shown in the table in par. 1, p. 168, after the expenditure from Consolidated Revenue (£11,475,000 to June, 1948) for that purpose had been deducted, was at the rate of 3.30 per cent. in 1947-48.

Exchange on interest payments abroad and certain other charges are not included in the table above. These items are not charged against the railways in Queensland and Western Australia and have been excluded for the purposes of comparison. In the remaining States the amounts paid on account of exchange in 1946-47 were—New South Wales, £698,62c; Victoria, £169,123; South Australia, £95,731; and Tasmania, £6,531; and in 1947-48—New South Wales, £648,000; Victoria, £168,089; South Australia, £86,288; and Tasmania, £1,104.

7. **Profit or Loss.**—The following table shows, for the years 1938-39 and 1943-44 to 1947-48, the actual profit or loss after deducting working expenses and interest, but excluding exchange, from the gross revenue:—

GOVERNMENT RAILWAYS: PROFIT OR LOSS.
PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES AND INTEREST.
(£'000.)

Year.	N.S.W. (a)	Victoria.	Q'land. (a)	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia. (a)
1938-39 ..	43	— 636	— 37	— 886	— 313	— 272	— 490	—2,718
1943-44 ..	2,438	766	1,689	— 308	— 452	— 354	575	4,227
1944-45 ..	2,354	524	542	— 758	— 539	— 363	— 45	1,588
1945-46 ..	1,939	242	11	— 1,291	— 960	— 378	— 277	— 825
1946-47 ..	141	— 1,179	— 597	— 1,465	— 1,411	— 461	— 463	—5,517
1947-48 ..	1,546	— 765	— 540	— 1,869	— 2,029	— 609	— 519	—4,867

(a) See note (a), par. 6, above.

8. **Traffic.**—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several State and Commonwealth systems, but also on different lines in the same system, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern

and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to seaborne competition. In recent years competition from road and air transport has become an important factor.

The following table shows particulars for the years 1943-44 to 1947-48 in comparison with 1938-39 :—

GOVERNMENT RAILWAYS : TRAFFIC.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
PASSENGER-JOURNEYS.								
('000.)								
1938-39 ..	186,720	142,123	24,639	17,529	11,416	2,297	117	384,841
1943-44 ..	250,566	194,138	38,154	27,356	18,773	3,131	522	532,640
1944-45 ..	254,999	195,698	38,062	24,820	18,099	3,261	473	535,412
1945-46 ..	267,423	196,118	38,199	23,119	17,136	3,414	347	545,756
1946-47 ..	261,644	170,165	34,188	19,827	13,879	3,252	223	503,178
1947-48 ..	263,047	182,210	29,325	19,067	13,928	2,974	216	510,767

PASSENGER-JOURNEYS PER AVERAGE ROUTE-MILE OF LINE WORKED.

(Number.)

1938-39 ..	30,541	29,896	3,752	6,854	2,608	3,490	53	14,134
1943-44 ..	40,889	40,888	5,811	10,741	4,285	4,877	237	19,573
1944-45 ..	41,465	41,217	5,934	9,745	4,131	5,079	215	19,675
1945-46 ..	43,639	41,305	5,818	9,077	3,911	5,318	158	20,055
1946-47 ..	42,697	35,839	5,207	7,784	3,192	5,074	101	18,513
1947-48 ..	42,925	38,563	4,470	7,486	3,203	4,844	98	18,832

GOODS AND LIVE-STOCK CARRIED.

('000 Tons.)

1938-39 ..	15,417	5,976	5,234	2,640	2,859	844	186	33,156
1943-44 ..	19,403	8,294	6,567	3,648	2,560	978	516	41,966
1944-45 ..	18,793	8,064	6,240	3,476	2,904	924	381	40,782
1945-46 ..	16,885	7,229	5,758	2,970	2,728	880	276	36,726
1946-47 ..	17,594	7,502	5,750	3,215	2,577	896	343	37,937
1947-48 ..	18,518	8,440	5,523	3,560	2,858	817	423	40,139

GOODS, ETC., CARRIED PER AVERAGE ROUTE-MILE OF LINE WORKED.

(Tons.)

1938-39 ..	2,522	1,257	797	1,032	653	1,282	84	1,218
1943-44 ..	3,166	1,747	923	1,432	584	1,523	234	1,525
1944-45 ..	3,067	1,698	950	1,365	663	1,443	173	1,499
1945-46 ..	2,755	1,523	877	1,166	623	1,375	125	1,350
1946-47 ..	2,871	1,593	876	1,262	593	1,398	156	1,396
1947-48 ..	3,022	1,786	841	1,398	657	1,331	192	1,480

(ii) *Metropolitan and Country Passenger Traffic and Revenue, 1947-48.* A further indication of the difference in passenger traffic conditions is obtained from the comparison of the volume of metropolitan and suburban and country traffic during 1947-48 shown below.

GOVERNMENT RAILWAYS : METROPOLITAN AND SUBURBAN, AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1947-48.

System.	Passenger-Journeys. (‘000.)			Revenue. (£’000.)		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
New South Wales	(a)	(a)	263,047	(a)	(a)	11,689
Victoria ..	171,012	11,198	182,210	3,577	2,871	6,448
Queensland ..	23,157	6,168	29,325	469	1,814	2,283
South Australia ..	17,111	1,956	19,067	306	733	1,039
Western Australia	11,853	2,075	13,928	176	684	860
Tasmania ..	(a)	(a)	2,974	(a)	(a)	221
Commonwealth ..	..	216	216	..	328	328
Australia ..	(a)	(a)	510,767	(a)	(a)	22,868

(a) Not available.

(iii) *Goods Traffic.* (a) *Classification.* Some indication of the differing conditions of the traffic in each system is also given by an examination of the tonnage of the various classes of commodities carried, and of the revenue derived therefrom. The following table shows the number of tons of various commodities carried during 1947-48.

GOVERNMENT RAILWAYS : CLASSIFICATION OF COMMODITIES CARRIED, 1947-48. (‘000 tons.)

System.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Wool.	Live Stock.	All other Com- modities.	Total.
New South Wales ..	(a)	(a)	(c) 1,498	139	1,110	15,771	18,518
Victoria ..	488	197	1,709	132	683	5,231	8,440
Queensland ..	1,075	395	(d) 1,831	64	646	1,512	5,523
South Australia ..	568	514	810	46	240	1,382	3,560
Western Australia..	362	196	799	36	158	1,307	2,858
Tasmania ..	111	67	(a)	4	28	607	817
Commonwealth ..	213	5	(a)	3	66	136	423
Australia ..	(b)	(b)	(b)	424	2,931	25,946	40,139

(a) Included with "All other Commodities".

(b) Not available.

(c) Grain only.

(d) Agricultural produce.

(b) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1947-48 :—

GOVERNMENT RAILWAYS : REVENUE FROM GOODS AND LIVE STOCK, 1947-48. (£’000.)

System.	General Merchan- dise.	Wool.	Live- stock.	Minerals.		Miscel- laneous.	Total.
				Coal and Coke.	Other.		
New South Wales ..	(a)	(a)	(a)	(a)	(a)	(a)	19,804
Victoria ..	6,039	293	684	212	68	96	7,992
Queensland ..	3,995	483	1,139	649	456	(b) 1,397	8,119
South Australia ..	2,004	110	281	188	478	(c) 319	3,380
Western Australia..	2,383	105	208	230	138	96	3,160
Tasmania ..	(a)	(a)	(a)	(a)	(a)	(a)	664
Commonwealth ..	479	7	115	65	5	4	675
Australia ..	(a)	(a)	(a)	(a)	(a)	(a)	43,794

(a) Not available.
£283,000.

(b) Includes agricultural produce, £1,380,000.

(c) Includes wheat.

(iv) *Passenger-Mileage and Ton-Mileage.* Particulars of passenger-mileage and ton-mileage in respect of the Government railways in Australia for the years 1938-39 to 1940-41 and 1946-47 and 1947-48 are shown in the following tables. Figures for the years 1941-42 to 1945-46 are very incomplete owing to the restriction of statistical publications necessitated by staff shortages and extra work caused by the recent world war.

(a) *Passenger-Mileage.* The following table shows particulars of passenger-mileage in respect of the Government railways in Australia for the years 1938-39 to 1940-41 and 1946-47 and 1947-48.

GOVERNMENT RAILWAYS: PASSENGER-MILEAGE SUMMARY.

Year ended 30th June—	Passenger Train-Mileage.	Total Passenger-Miles.	Average Passengers per Train-Mile.	Average Mileage per Passenger Journey.	Passenger Earnings.				Density of Traffic per Average Route-Mile Worked.
					Gross.	Per Average Route-Mile Worked.	Per Passenger-Mile.	Per Passenger Train-Mile.	
	'000.	'000.	No.	Miles.	£'000.	£	d.	d.	No.
NEW SOUTH WALES.									
1939	19,173	2,149,154	112	11.51	6,024	985	0.67	75.41	351,526
1940	18,388	2,199,564	120	12.28	6,347	1,038	0.69	82.84	359,523
1941	19,890	2,716,377	137	13.99	7,036	1,246	0.67	92.14	443,345
1947	(a)	(a)	(a)	(a)	610,408	1,698	(a)	(a)	(a)
1948	(a)	(a)	(a)	(a)	611,689	1,907	(a)	(a)	(a)
VICTORIA.									
1939	12,434	1,292,843	104	9.10	3,855	811	0.72	74.40	271,948
1940	11,843	1,367,596	115	9.45	4,032	847	0.71	81.71	287,375
1941	12,558	1,685,814	134	10.59	5,004	1,051	0.71	95.63	354,245
1947	10,309	(a)	(a)	(a)	5,751	1,211	(a)	133.88	(a)
1948	10,960	1,838,932	168	10.06	6,448	1,365	0.84	141.31	389,192
QUEENSLAND. (c)									
1939	5,750	(a)	(a)	(a)	1,523	232	(a)	63.55	(a)
1940	5,916	(a)	(a)	(a)	1,574	240	(a)	63.84	(a)
1941	5,939	(a)	(a)	(a)	1,711	263	(a)	69.15	(a)
1947	6,136	(a)	(a)	(a)	2,378	366	(a)	93.01	(a)
1948	5,553	(a)	(a)	(a)	2,282	352	(a)	98.64	(a)
SOUTH AUSTRALIA.									
1939	3,747	212,982	57	12.15	600	235	0.68	38.45	83,281
1940	3,615	220,037	61	12.47	630	246	0.69	41.81	86,040
1941	3,519	277,570	79	13.63	821	321	0.71	56.00	108,532
1947	3,492	320,844	92	16.18	1,044	410	0.78	71.77	125,970
1948	3,597	312,575	87	16.39	1,039	407	0.80	69.31	122,723
WESTERN AUSTRALIA.									
1939	2,795	(a)	(a)	(a)	514	117	(a)	44.12	(a)
1940	2,678	(a)	(a)	(a)	540	123	(a)	48.42	(a)
1941	2,762	(a)	(a)	(a)	641	146	(a)	55.70	(a)
1947	2,955	(a)	(a)	(a)	864	190	(a)	70.14	(a)
1948	3,107	(a)	(a)	(a)	860	198	(a)	66.46	(a)
TASMANIA.									
1939	1,027	35,193	34	15.32	129	196	0.88	30.15	53,485
1940	1,161	37,260	32	15.45	133	207	0.86	26.72	57,871
1941	1,193	(a)	(a)	(a)	166	258	(a)	33.36	(a)
1947	1,137	(a)	(a)	(a)	247	385	(a)	52.15	(a)
1948	1,093	(a)	(a)	(a)	221	359	(a)	53.04	(a)
COMMONWEALTH. (d)									
1939	388	34,085	88	290.98	146	66	1.03	90.21	15,486
1940	423	11,245	92	318.04	180	82	1.05	102.37	18,730
1941	494	67,985	138	350.46	206	134	1.04	143.92	30,887
1947	421	65,054	154	292.28	305	139	1.13	174.09	29,550
1948	454	67,685	149	312.62	329	149	1.17	173.64	30,752

(a) Not available. (b) Estimated. (c) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line. (d) Railways controlled by Commonwealth Government.

(b) *Ton-Mileage.* Particulars of total ton-mileages are shown in the following table for each of the years 1938-39 to 1940-41 and 1946-47 and 1947-48.

GOVERNMENT RAILWAYS: TON-MILEAGE SUMMARY.

Year ended 30th June—	Goods-Train-Mileage.	Total Ton-Miles.	Average Freight Paying Load per Train-Mile.	Average Haul per Ton.	Goods and Live Stock Earnings.				Density of Traffic per Average Route-Mile Worked.
					Gross.	Per Average Route-Mile Worked.	Per Ton-Mile.	Per Goods-Train-Mile.	
					£'000.	£	d.	d.	
	'000.	'000.	Tons.	Miles.	£'000.	£	d.	d.	Tons.
NEW SOUTH WALES.									
1939	10,933	1,760,534	161	115.95	10,356	1,694	1.41	227.34	287,901
1940	11,082	1,827,662	165	126.11	10,851	1,774	1.42	225.98	298,735
1941	12,395	2,115,786	171	118.63	12,415	2,026	1.39	240.39	345,885
1947	(a)	2,706,240	(a)	153.81	14,326	2,338	1.27	(a)	441,619
1948	(a)	2,777,137	(a)	149.07	19,804	3,232	1.71	(a)	453,188
VICTORIA.									
1939	5,455	760,485	139	127.26	4,276	899	1.35	188.11	159,967
1940	5,165	818,637	159	132.32	4,637	974	1.30	218.48	172,021
1941	5,209	811,890	156	122.59	4,860	1,021	1.44	223.92	170,601
1947	5,230	981,908	188	129.85	6,109	1,287	1.49	280.32	206,805
1948	5,859	1,154,631	197	136.81	7,092	1,689	1.66	327.34	244,371
QUEENSLAND.(b)									
1939	8,073	745,351	92	147.57	5,404	823	1.73	160.67	118,248
1940	8,175	760,635	94	144.72	5,046	860	1.76	165.76	121,625
1941	8,527	811,464	95	150.76	5,695	876	1.67	160.29	128,737
1947	9,861	991,069	101	183.11	7,268	1,119	1.75	176.90	152,542
1948	9,186	966,016	105	184.63	7,871	1,213	1.96	205.63	148,824
SOUTH AUSTRALIA.									
1939	2,430	348,553	143	132.01	2,144	838	1.48	211.72	130,293
1940	2,313	336,885	146	125.93	2,167	847	1.54	220.48	131,730
1941	2,373	330,836	139	120.65	2,261	884	1.64	228.62	129,359
1947	2,518	400,093	159	124.43	2,946	1,157	1.77	280.80	157,084
1948	2,537	445,472	176	125.14	3,380	1,327	1.82	318.75	174,901
WESTERN AUSTRALIA.									
1939	3,779	378,080	100	132.24	2,807	641	1.78	178.26	80,393
1940	3,456	301,600	105	136.03	2,745	626	1.82	190.61	82,570
1941	3,382	351,245	104	134.89	2,651	605	1.75	188.16	80,169
1947	3,639	395,778	101	141.94	2,810	646	1.84	185.31	84,126
1948	4,004	415,088	104	145.57	3,160	727	1.82	189.41	95,673
TASMANIA.									
1939	880	38,088	43	46.80	296	450	1.87	80.76	57,885
1940	904	42,265	47	49.83	336	522	1.91	89.20	65,630
1941	974	48,784	50	52.68	367	572	1.81	90.41	75,088
1947	1,085	63,586	59	70.95	581	906	2.19	128.47	99,198
1948	1,119	65,144	58	79.68	664	1,082	2.45	142.51	106,007
COMMONWEALTH.(c)									
1939	514	34,801	68	187.28	224	102	1.54	104.38	15,811
1940	535	37,904	71	190.39	248	112	1.57	111.18	17,221
1941	740	48,982	66	232.06	421	191	2.06	136.50	22,254
1947	1,092	96,684	89	282.29	580	264	1.44	127.53	43,926
1948	1,148	109,586	95	288.91	675	307	1.48	141.07	49,789

(a) Not available.

(b) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line.

(c) Railways controlled by the Commonwealth Government.

9. **Rolling Stock.**—The following table shows the number of rolling stock in use at 30th June for each of the years 1939, 1947 and 1948. Further details may be found in *Transport and Communication Bulletins*.

GOVERNMENT RAILWAYS : ROLLING STOCK.

System.	30th June—								
	1939.			1947.			1948.		
	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.
New South Wales ..	1,284	2,808	24,257	1,151	2,809	25,565	1,165	2,806	25,422
Victoria ..	581	2,439	20,993	599	2,484	21,043	599	2,487	20,929
Queensland ..	752	1,413	18,733	778	1,443	20,685	784	1,447	20,569
South Australia ..	335	594	7,966	330	646	8,010	363	646	8,263
Western Australia ..	427	475	11,110	441	428	11,113	423	420	11,268
Tasmania ..	95	225	2,120	96	216	2,315	86	254	2,331
Commonwealth ..	113	89	1,359	161	124	2,058	130	100	1,766
Australia ..	3,587	8,043	86,538	3,550	8,150	90,789	3,550	8,160	90,548

10. **Accidents.**—The following table shows particulars of the number of persons killed and injured through train accidents and the movement of rolling stock on the Government railways of Australia for each of the years 1938-39, 1946-47 and 1947-48 :—

GOVERNMENT RAILWAYS : ACCIDENTS.

System.	1938-39.		1946-47.		1947-48 (a)	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales ..	57	625	(a) 44	(a) 475	52	501
Victoria ..	48	466	43	374	53	425
Queensland ..	23	132	50	295	21	90
South Australia ..	9	187	14	148	6	56
Western Australia ..	14	142	19	202	17	95
Tasmania ..	7	62	3	6	7	15
Commonwealth ..	1	20	..	138	7	206
Australia ..	159	1,634	173	1,638	163	1,388

(a) Excludes accidents to railway employees.

11. **Consumption of Oil and Coal.**—The following table shows the quantities and values of oil and coal consumed by the various Government Railway Departments during 1947-48:—

GOVERNMENT RAILWAYS : OIL AND COAL CONSUMED, 1947-48.

System.	Oil.				Coal.			
	Lubrication.		Fuel, Light, etc.		Locomotives.		Other Purposes.	
	Gallons ('000).	£'000.	Gallons ('000).	£'000.	Tons ('000).	£'000.	Tons ('000).	£'000.
N.S.W. ...	(a)	(a)	(a)	(a)	1,366	1,636	894	1,385
Victoria ..	202	37	17,618	696	340	725	174	338
Q'land. ..	269	56	592	43	525	703	20	22
S. Aust. ..	98	20	2,242	124	301	690	6	12
W. Aust. ..	164	35	5,686	254	361	437	6	8
Tas. ..	53	12	158	11	76	120	1	1
C'wealth ..	38	8	429	22	74	240	1	4
Australia	(a)	(a)	(a)	(a)	3,043	4,551	1,102	1,770

(a) Not available.

12. **Staff Employed and Salaries and Wages Paid.**—The following tables show details of the average staff employed and the salaries and wages paid by the Government railways of Australia during 1946-47 and 1947-48 :—

GOVERNMENT RAILWAYS : AVERAGE STAFF EMPLOYED (a), AND SALARIES AND WAGES PAID.

System.	Operating Staff.			Construction Staff.			Total Salaries and Wages Paid.	Average Earnings Per Employee.
	Salaried.	Wages.	Total.	Salaried.	Wages.	Total.		

1946-47.

New South Wales ..	No. 9,059	No. 47,828	No. 56,887	No. 28	No. 480	No. 508	£'000. 21,163	£ 369
Victoria ..	3,744	23,800	27,544	(b)	(b)	(b)	9,566	347
Queensland ..	3,707	19,616	23,323	..	..	..	8,832	379
South Australia ..	1,774	8,458	10,232	12	93	105	3,541	346
Western Australia ..	1,513	8,338	9,851	..	..	..	3,244	329
Tasmania ..	294	2,418	2,712	..	80	80	880	315
Commonwealth ..	258	2,139	2,397	..	52	52	863	352
Australia ..	20,349	112,597	132,946	40	705	745	48,089	360

1947-48.

New South Wales ..	No. 9,434	No. 48,239	No. 57,673	No. 39	No. 633	No. 672	£'000. 25,495	£ 437
Victoria ..	4,365	22,616	26,981	(b)	(b)	(b)	11,586	430
Queensland ..	3,759	20,195	23,954	..	..	..	9,095	380
South Australia ..	1,753	7,399	9,152	5	832	837	4,156	454
Western Australia ..	1,605	9,026	10,631	..	..	..	4,024	379
Tasmania ..	321	2,290	2,611	2	100	102	1,023	377
Commonwealth ..	240	2,108	2,348	..	52	52	958	309
Australia ..	21,437	111,873	133,310	46	1,617	1,663	56,337	420

(a) Excludes members of staff serving with Defence Services.
work is not under the control of the Railways Commissioners.

(b) In Victoria railway construction

§ 3. Private Railways.

1. **General.**—The bulk of the private railways in Australia has been laid down for the purpose of hauling timber, firewood, sugar-cane, coal and other minerals, and it is not generally used for the conveyance of passengers or for public goods traffic. In many cases the lines are practically unballasted and easily removable.

The railways referred to in this section include only lines open to the public for general passenger and goods traffic. Complete particulars of lines used for special purposes only are not available.

2. **Lines Open for General Traffic, 1947-48.**—The following statement is a summary of the operations of private railways open for general traffic during 1947-48:—

PRIVATE RAILWAYS : SUMMARY OF OPERATIONS, 1947-48.

State.	Route-Miles Open.	Capital Cost.	Gross Revenue.	Working Expenses.	Train-Miles Run.	Passenger-Journeys.	Goods, etc., Carried.	Em- ployees.
	Miles.	£'000.	£'000.	£'000.	'000.	'000.	'000 tons.	No.
N.S.W.(a)	54	1,270	417	328	453	1,092	625	420
Vic. ..	13	44	10	10	13	7	22	16
Q'land(a) ..	136	113	26	25	46	2	243	25
S.A.(a) ..	51	526	(b)	(b)	91	52	2,157	172
W.A. ..	277	2,302	262	172	315	28	186	378
Tas.(a) ..	117	943	231	219	179	44	182	328
Australia(a)	648	5,198	946	754	1,097	1,225	3,415	1,339

(a) Incomplete.

(b) Not available.

Some of the particulars given in the table are incomplete in respect of New South Wales, Queensland, South Australia and Tasmania. In New South Wales and Queensland several lines, although owned by private companies, are operated by the Government Railway Departments, and Government rolling stock is used thereon, while some of the companies are not able to supply particulars of the capital cost, revenue and working expenses of the lines which they operate. In some cases the figures relating to tonnage of goods, etc., include particulars of coal, ores, timber, sugar-cane, etc., carried for private purposes, as details relating to goods carried for the general public are not recorded separately.

C. TRAMWAYS.

1. **Systems in Operation.**—(i) *General.* Tramway systems are in operation in all the capital cities and in a number of the larger towns of Australia.

Since 1st April, 1947, when the last private company system to operate (the Kalgoorlie-Boulder electric tramway system in Western Australia) was taken over by the Eastern Goldfields Transport Board, all systems have been operated by governmental or municipal authorities. From 1941-42 all systems have been electric.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways (*see above*), and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present section.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show for each State the total mileage of tramway lines open for general passenger traffic for 1947-48 classified (a) according to the controlling authority; (b) according to gauge:—

TRAMWAYS : ROUTE-MILEAGE OPEN, 1947-48.

(Miles.)

Particulars—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
ACCORDING TO CONTROLLING AUTHORITY.							
Government ..	171	172	..	..	57	..	400
Municipal ..	..	..	64	96	11	35	206
Total ..	171	172	64	96	68	35	606
ACCORDING TO GAUGE.							
Gauge—							
5 ft. 3 in. ..	..	5	..	..	..	..	5
4 ft. 8½ in. ..	171	167	64	96	..	..	498
3 ft. 6 in. ..	..	..	..	..	68	35	103
Total ..	171	172	64	96	68	35	606

2. **Summary of Operations, Australia.**—The following table is a summary of the working of all electric tramway systems in Australia for the years 1938-39 and 1943-44 to 1947-48 :—

ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS, AUSTRALIA.

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Mileage open for traffic miles	586	602	603	606	614	606
Cost of construction and equipment £'000	26,275	26,888	27,156	27,428	27,067	<i>b</i> 27,293
Cost per mile £	44,827	44,664	45,034	45,261	44,083	<i>b</i> 45,038
Gross revenue £'000	7,649	11,238	11,205	11,313	<i>b</i> 11,210	<i>b</i> 12,456
Working expenses „	6,089	8,372	8,420	8,858	9,495	<i>b</i> 11,392
Net earnings „	1,560	2,866	2,845	2,455	1,715	<i>b</i> 1,064
Interest „	909	827	790	724	628	654
Percentage of working expenses on gross revenue .. %	79.60	74.50	74.74	78.29	84.71	91.46
Percentage of net earnings on capital cost .. %	5.94	10.66	10.48	8.95	6.33	3.90
Car-miles run '000 miles	81,361	87,157	87,756	88,878	87,581	87,650
Gross revenue per car-mile .. d.	22.56	30.94	30.81	30.55	30.72	34.11
Working expenses per car-mile .. d.	17.96	23.05	23.03	23.92	26.02	31.19
Net earnings per car-mile .. d.	4.60	7.89	7.78	6.63	4.70	2.92
Passenger-journeys '000	695,476	1,083,212	1,069,716 <i>a</i>	1,049,254 <i>a</i>	<i>b</i> 986,550 <i>a</i>	<i>b</i> 943,097 <i>a</i>
Passenger-journeys per car-mile .. No.	8.55	12.43	12.19	11.81	11.26	10.76
Average revenue per passenger-journey d.	2.64	2.49	2.53	2.59	2.73	3.17
Persons employed at end of year No.	17,207	19,051	20,149	20,938	<i>c</i> 21,705	<i>c</i> 22,266

(a) Excludes passengers crossing Sydney Harbour Bridge whose journeys did not extend beyond Bridge Section. (b) Includes particulars of Hobart Municipal Council Omnibus Service. (c) Includes motor omnibus employees, Western Australia and Hobart Municipal Council Omnibus Services.

3. **Traffic and Accidents.**—Particulars of the traffic of electric tramways and the accidents which occurred in the movement of rolling stock are shown in the following table for each State during 1947-48 and for Australia during 1938-39 and 1943-44 to 1947-48 :—

ELECTRIC TRAMWAYS : TRAFFIC AND ACCIDENTS.

State.	Average Mileage Open for Year.		Car-Miles Run.	Passenger-Journeys.	Average Number Persons per Car-Mile.	Accidents.	
	Route.	Track.				Persons—	
						Killed.	Injured.
STATES, 1947-48.							
	Miles.	Miles.	'000.	'000.	No.	No.	No.
New South Wales	171	320	134,500	6367,739	10.66	44	3,956
Victoria ..	172	319	25,002	279,451	11.18	19	848
Queensland ..	64	116	10,314	132,107	12.81	7	407
South Australia ..	96	150	9,674	76,819	7.94	15	146
Western Australia	68	105	5,431	53,148	9.79	5	397
Tasmania ..	35	47	2,729	<i>c</i> 33,833	12.40	..	185
Australia ..	606	1,057	87,650	943,097	10.76	90	5,939

AUSTRALIA, 1938-39 AND 1943-44 TO 1947-48.

1938-39.. ..	586	1,046	81,361	695,476	8.55	61	2,750
1943-44	602	1,054	87,157	1,083,212	12.43	<i>(d)</i> 121	<i>(d)</i> 5,031
1944-45	603	1,057	87,756	1,069,716 <i>l</i>	12.19	100	5,367
1945-46	606	1,056	88,878	1,049,254 <i>b</i>	11.81	97	6,297
1946-47.. ..	614	1,064	87,581	<i>c</i> 986,550 <i>b</i>	11.26	113	6,704
1947-48	606	1,057	87,650	<i>c</i> 943,097 <i>b</i>	10.76	90	5,939

(a) Estimated. (b) See note (a) to preceding table. (c) Includes passengers carried by Hobart Municipal Council Omnibus Service. (d) Excludes particulars for Perth.

4. **State Details.**—(i) *General.* For details of the various systems operating in the several States see Official Year Book No. 37 and issues prior to No. 32.

(ii) *Summary of Operations.* The following table shows particulars of the working of electric tramways in each State of Australia for the years 1943-44 to 1947-48 in comparison with the year 1938-39:—

ELECTRIC TRAMWAYS : SUMMARY OF OPERATIONS.

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Percentage of Working Expenses on Gross Revenue.	Car-Miles.	Passenger-Journeys.	Persons employed at end of year.
		£'000.	£'000.	£'000.	£'000.	£'000.	%	'000.	'000.	

NEW SOUTH WALES.

1939	182	8,944	3,449	3,080	369	310	89.30	34,941	322,238	8,062
1944	172	8,712	4,302	3,913	389	258	90.96	a 34,000	436,048	9,285
1945	172	8,715	4,320	3,874	446	259	89.68	a 35,500	b 424,225	9,251
1946	172	8,727	4,370	4,128	242	232	94.47	a 36,200	b 417,344	9,320
1947	172	8,736	4,360	4,378	—18	220	100.42	a 34,700	b 394,125	9,760
1948	171	8,754	5,310	5,378	—68	230	101.28	a 34,500	b 367,739	9,651

VICTORIA.

1939	166	8,086	2,112	1,388	724	254	65.72	22,803	175,198	4,355
1944	171	8,760	3,403	2,001	1,402	202	58.80	25,451	304,404	4,470
1945	172	8,744	3,476	2,036	1,440	185	58.57	25,172	310,052	4,826
1946	172	8,897	3,495	2,126	1,369	180	60.81	25,103	306,659	5,305
1947	172	9,120	3,427	2,324	1,103	111	67.82	24,830	285,450	5,322
1948	172	9,276	3,332	2,593	739	107	77.83	25,002	279,451	5,728

QUEENSLAND.

1939	60	2,391	831	632	199	120	76.05	8,100	91,444	1,911
1944	63	2,350	1,455	896	559	132	61.58	10,017	157,432	1,929
1945	63	2,327	1,462	956	506	101	65.39	10,327	159,679	2,314
1946	63	2,358	1,356	985	371	90	72.64	10,107	147,007	2,383
1947	64	2,575	1,337	1,034	303	89	77.32	10,227	135,757	2,521
1948	64	2,662	1,508	1,221	287	91	80.98	10,314	132,107	2,650

SOUTH AUSTRALIA.

1939	78	4,438	711	494	217	154	69.48	8,712	52,906	1,750
1944	96	4,477	1,190	877	313	158	73.70	9,065	88,889	1,959
1945	96	4,759	1,144	884	260	156	77.27	8,719	84,243	2,290
1946	96	4,812	1,190	934	265	158	77.87	9,518	84,970	2,331
1947	99	3,975	1,228	1,019	209	147	82.92	9,757	83,365	2,284
1948	96	4,013	1,417	1,244	173	151	87.77	9,674	76,819	2,310

ELECTRIC TRAMWAYS: SUMMARY OF OPERATIONS—*continued.*

Year ended 30th June—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Percentage of Working Expenses on Gross Revenue.	Car-Miles.	Passenger-Journeys.	Persons employed at end of year.
		£'000.	£'000.	£'000.	£'000.	£'000.	%	'000.	'000.	

WESTERN AUSTRALIA.

1939	71	1,752	367	342	25	44	93.19	4,756	38,095	792
1944	69	1,878	615	515	100	48	83.74	6,087	65,269	998
1945	69	1,863	573	480	93	48	83.77	5,432	59,788	1,010
1946	69	1,867	583	513	70	48	87.93	5,321	59,805	1,100
1947	69	1,869	535	526	9	48	98.32	5,361	53,016	c 1,196
1948	68	1,433	550	635	—85	52	115.44	5,431	53,148	c 1,238

TASMANIA.

1939	29	664	179	153	26	27	85.47	2,049	15,595	337
1944	31	711	273	170	103	29	62.27	2,537	31,170	410
1945	31	748	290	190	100	41	65.52	2,606	31,729	458
1946	34	767	310	172	138	16	55.43	2,629	33,469	499
1947	38	792	(d) 323	214	109	13	66.37	2,706	(d) 34,837	(d) 622
1948	35	(d) 855	(d) 339	d 321	(d) 18	(d) 14	d 94.62	2,729	(d) 33,833	(d) 689

AUSTRALIA.(e)

1939	586	26,275	7,649	6,089	1,560	909	79.60	81,361	695,476	17,207
1944	602	26,888	11,238	8,372	2,866	827	74.50	87,157	1,083,212	19,051
1945	603	27,156	11,265	8,420	2,845	790	74.74	87,756	1,069,716	20,149
1946	606	27,428	11,313	8,558	2,455	724	78.29	88,878	1,049,254	20,938
1947	614	27,067	11,210	9,495	1,715	628	84.71	87,581	986,550	21,705
1948	606	27,293	12,456	11,392	1,064	654	91.46	87,650	943,097	22,266

(a) Estimated. (b) See note (a) to table in para. 2 above. (c) Includes motor omnibus employees. (d) Includes Hobart Municipal Council Omnibus Service. (e) See notes (a) to (d).

D. MOTOR OMNIBUS PASSENGER SERVICES.

1. **General.**—Motor omnibus passenger services have been in operation for some years in the capital cities and some of the larger towns of the States of Australia, and in the Australian Capital Territory.

Governmental and municipal authorities operate certain services and the others are run by private operators; in the States the former are run in conjunction with the existing electric tramway systems.

2. Government and Municipal Services.—(i) *Summary of Operations, 1947-48.* The following table is a summary of the operations during the year ended 30th June, 1948 of omnibus systems controlled by Governmental and Municipal authorities.

GOVERNMENT AND MUNICIPAL MOTOR OMNIBUS PASSENGER SERVICES, 1947-48.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	Aus- tralia.
Length of route .. miles	459	69	262	21	(a) 1,091	521	11	2,434
Number of buses .. No.	668	322	196	73	73	51	40	1,423
Capital cost .. £'000	2,631	916	550	223	228	(e) 126	71	4,745
Bus-mileage run .. '000 miles	23,158	7,875	2,196	1,376	1,801	803	720	37,929
Passenger-journeys .. '000	b 144,653	67,154	18,249	6,121	6,157	(c) 2,789	3,919	249,042
Gross revenue .. £'000	2,544	747	199	124	112	(c) 86	50	3,862
Working expenses .. £'000	(d) 2,772	758	166	148	125	(c) 64	76	4,109
Number of employees .. No.	4,013	1,525	384	(e)	(h) 48	(f) 80	150	(g) 6,200

(a) Includes railway bus service, Perth-Kojonup. (b) Excludes passengers across Sydney Harbour Bridge whose journeys did not extend beyond the Bridge section. (c) Excludes Hobart Municipal Council Service. (d) Includes estimate of administrative and general charges. (e) Not available, employees interchangeable with Electric Tramways and included therein (Section C). (f) Excludes employees Hobart Municipal buses, who are interchangeable with Electric Tramways and included therein (see Section C). (g) See notes (e) and (f). (h) Excludes Government Services.

(ii) *Summary of Operations, Australia.* The following table is a summary of the working of motor omnibus passenger services in Australia under governmental and municipal control during the five years ended 1947-48.

GOVERNMENT AND MUNICIPAL MOTOR OMNIBUS PASSENGER SERVICES : SUMMARY OF OPERATIONS, AUSTRALIA.

Particulars.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Length of route .. miles	760	768	852	1,062	2,434
Number of buses .. No.	949	997	1,003	1,112	1,423
Capital cost .. £'000	2,196	2,275	2,301	2,842	(b) 4,745
Gross revenue .. £'000	2,458	2,508	2,627	(b) 2,725	(b) 3,862
Working expenses .. £'000	2,353	2,599	2,836	3,000	(b) 4,109
Net revenue .. £'000	105	— 91	— 209	— 275	(b) — 247
Percentage of working expenses on gross revenue .. %	95.73	103.65	107.95	110.11	(b) 106.39
Percentage of net revenue on capital cost .. %	4.78	— 4.03	— 9.08	— 9.74	b — 5.21
Bus-mileage run .. '000 miles	29,555	29,745	30,685	31,710	37,929
Gross revenue per bus-mile run d.	19.96	20.23	20.55	b 20.62	b 24.44
Working expenses per bus-mile run d.	19.11	20.97	22.18	22.70	b 26.00
Net revenue per bus-mile run d.	0.85	— 0.74	— 1.63	— 2.08	b — 1.56
Passenger-journeys .. '000	209,354	214,919	220,022	b 214,202	b 249,042
Passenger-journeys per bus-mile No.	7.08	7.26	7.17	(b) 6.75	(b) 6.57
Average gross revenue per passenger-journey .. d.	2.81	2.80	2.86	(b) 3.05	(b) 3.72
Number of employees (a) .. No.	4,857	4,774	4,712	(b) 4,697	(b) 5,200

(a) Excludes South Australia, and, for 1946-47 and 1947-48, Western Australian Government Services and Hobart Municipal Council Service. (b) Excludes Hobart Municipal Council Service.

3. Privately Controlled Services.—(i) *General.* Particulars of motor omnibus passenger services under the control of private operators are recorded in the States of New South Wales, South Australia and Western Australia only.

In New South Wales, particulars are compiled for the Metropolitan and Newcastle Transport Districts only, but in South Australia and in Western Australia all operators throughout the State are represented.

(ii) *Summary of Operations.* The operations of motor omnibus passenger services under the control of private operators in these States during the five years ended June, 1948, are shown in the following table.

PRIVATE MOTOR OMNIBUS PASSENGER SERVICES : SUMMARY OF OPERATIONS.

Year.						
	Buses.	Bus-mileage Run.	Passenger-Journeys.	Capital Cost.	Gross Revenue.	Persons Employed.
	No.	'000.	'000.	£'000.	£'000.	No.
NEW SOUTH WALES.(a)						
1943-44 ..	490	10,093	54,118	350	761	835
1944-45 ..	519	10,873	59,474	393	836	899
1945-46 ..	555	12,106	66,117	466	951	991
1946-47 ..	615	14,261	73,703	569	1,065	1,085
1947-48 ..	673	15,626	77,985	783	1,278	1,234
SOUTH AUSTRALIA.						
	(b)					
1943-44 ..	57	3,465	7,187	(c)	278	(c)
1944-45 ..	57	3,520	7,571	(c)	295	(c)
1945-46 ..	68	3,787	8,269	(c)	325	(c)
1946-47 ..	81	4,929	8,465	(c)	399	(c)
1947-48 ..	90	5,362	9,774	(c)	457	(c)
WESTERN AUSTRALIA.						
1943-44 ..	270	8,080	24,415	(c)	594	586
1944-45 ..	260	8,050	25,180	(c)	611	634
1945-46 ..	269	8,514	26,396	218	626	671
1946-47 ..	276	9,210	27,699	309	642	758
1947-48 ..	317	10,214	28,048	455	721	865

(a) Metropolitan and Newcastle Transport Districts only.
available.

(b) Metropolitan area only.

(c) Not

E. FERRY (PASSENGER) SERVICES.

1. *General.*—In New South Wales ferry services have been established by private companies to transport passengers in the ports of Sydney and Newcastle. In Western Australia services are operated on the Swan River at Perth under both Government and private control. Passenger ferries in Tasmania are under both Government and private control and operate on the Derwent River at Hobart and also at Devonport. Inextensive services operate in the States of Victoria and Queensland, but no ferry services are in operation in South Australia.

2. *Summary of Operations.*—The following statement is a summary of operations of ferry passenger services in New South Wales, Western Australia and Tasmania during the years 1943-44 to 1947-48 compared with the year 1938-39. Particulars of passengers carried on vehicular ferries are not included.

FERRY (PASSENGER) SERVICES (Exclusive of Vehicular Ferries).

Year.	Vessels.		Passenger- Accom- modation.	Passenger- Journeys.	Gross Revenue.	Persons Employed.
	No.	No.	No.	'000.	£	No.
NEW SOUTH WALES—SYDNEY AND NEWCASTLE.						
1938-39	54	38,971	27,864	418,500
1943-44	45	28,809	34,588	540,513
1944-45	47	29,369	36,673	533,853
1945-46	46	28,551	35,737	518,867
1946-47	46	28,591	31,558	471,976
1947-48	47	28,808	28,319	502,947

(a)

WESTERN AUSTRALIA—PERTH.

1938-39	..	..	6	880	1,184	11,001	25
1943-44	..	..	7	1,022	1,522	14,655	25
1944-45	..	..	7	1,022	1,475	15,284	25
1945-46	..	..	7	1,022	1,443	13,739	25
1946-47	..	..	7	1,022	1,367	13,007	25
1947-48	..	..	6	957	1,375	13,354	28

TASMANIA.

1945-46 (b)	..	..	7	1,348	953	15,910	28
1946-47	..	..	7	1,348	974	16,029	32
1947-48	..	..	7	1,362	987	17,066	31

(a) Includes administrative staff for years prior to 1944-45.

(b) Particulars are not available for earlier years.

F. MOTOR VEHICLES.

1. Motor Industry.—Although motor cars have not, until recently, been manufactured in Australia, the capital invested in assembling and body-building plants is considerable. The importance of the industry is shown by the following figures which relate to the local manufacture of motor bodies and the importation of motor cars, fuel and tyres during 1938-39 and the five years ended 1947-48. Values of imports are expressed in £A. f.o.b.

MOTOR VEHICLES, ETC. : LOCAL MANUFACTURE AND IMPORTS, AUSTRALIA.

Particulars.	Unit.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Local Manufacture—							
Motor bodies built	No.	79,436	29,309	22,805	19,473	45,374	58,354
	£A'000	6,421	2,583	2,530	2,357	5,691	9,210
Imports—							
Motor bodies ..	No.	532	694	6	223	742	13,724
	£A'000	65	60	1	34	149	2,174
Chassis ..	No.	76,094	9,186	6,660	10,113	66,785	66,832
	£A'000	7,315	2,901	3,154	1,879	11,480	15,180
Chassis and motor parts ..	£A'000	956	10,918	7,025	520	1,876	3,100
Motor Vehicles complete ..	No.	..	..	..	4,789	523	362
	£A'000	..	..	..	5,192	250	295
Crude petroleum	Mil. gal.	54	1	..	16	63	82
	£A'000	512	5	3	229	1,096	2,497
Petroleum spirit. .	Mil. gal.	345	372	287	371	357	404
	£A'000	5,939	11,327	8,470	8,993	8,940	13,844
Pneumatic tyres and tubes ..	'000 lb.	323	125	299	1,377	1,956	2,006
	£A'000	32	37	37	188	326	359

2. **Registration.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders thereof are not uniform throughout Australia. Methods of registration, licence fees payable, etc., in each State are referred to in Official Year Book No. 116, pp. 337-40, and later issues.

3. **Public Vehicles.**—In all the capital cities of the States and in many of the provincial centres taxi-cabs and other vehicles ply for hire under licence granted either by the Commissioner of Police or the local government authority concerned. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

4. **Motor Omnibuses.**—In both urban and provincial centres motor omnibus traffic has assumed considerable proportions during recent years, and has had a marked effect on railway and tramway services. In some States the railway and tramway systems run motor services complementary to their main services to meet the competition of private enterprise and to endeavour to protect the existing transport utilities provided by public bodies. In addition, there has been a considerable replacement, during the last few years, of existing tramway services by trolley-bus and motor-bus services. (See Section D.)

5. **Motor Vehicles on the Register, etc.**—(i) *Year 1947-48.* Particulars of the registration of motor vehicles, licences issued and revenue received for 1947-48 are contained in the following table. A graph showing motor vehicle registrations since the year 1920 may be found on p. 172.

MOTOR VEHICLES : REGISTRATIONS AND REVENUE, 1947-48.

(Excluding Defence Service Vehicles.)

State or Territory.	Motor Vehicles Registered at 30th June, 1948.(a)					Drivers' and Riders' Licences in force at 30th June, 1948.	Gross Revenue derived from—			
	Motor Cars.(b)	Commercial Vehicles (c)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June, 1948.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
	No.	No.	No.	No.	No.		£	£	£	£
N.S. Wales	215,332	128,849	30,076	374,257	123.71	598,512	2,786,932	307,233	416,205	3,510,370
Victoria ..	171,203	112,007	29,143	321,143	153.75	470,071	2,110,859	117,750	217,901	2,455,518
Q'land ..	77,939	70,782	13,301	171,100	151.78	221,497	972,580	80,515	195,243	1,254,347
S. Australia	70,072	35,041	11,205	120,578	183.24	150,003	683,007	78,058	27,232	788,357
W. Aus't.	35,590	35,001	8,877	79,474	154.23	103,438	600,210	36,849	50,827	606,895
Tasmania ..	19,005	10,239	1,101	34,245	130.52	40,388	245,107	20,194	48,255	313,556
Nor. Terr.	592	2,513	149	3,254	261.20	2,880	6,090	1,379	..	7,469
A.C.T.	1,841	950	194	2,985	158.96	4,705	14,431	2,308	135	16,874
Anstralia.	593,077	414,072	100,196	1,107,345	143.62	1,601,394	7,437,294	650,294	955,798	9,043,386

(a) Excludes Trailers (52,996), Road Tractors, etc. (5,814), and Dealers' Plates (3,573).

(b) Includes Taxis and Hire Cars

(c) Includes Lorries, Vans, Buses and Utility Trucks.

(d) Includes vehicles registered as primary producers' (60,992).

(ii) *Years 1938-39 and 1943-44 to 1947-48.* The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1943-44 to 1947-48 in comparison with 1938-39 :—

MOTOR VEHICLES : REGISTRATIONS AND REVENUE, AUSTRALIA.

(Excludes Defence Service Vehicles.)

Year.	Motor Vehicles Registered at 30th June.					Gross Revenue derived from—				
	Motor Cars.	Commercial Vehicles. (a)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June.	Drivers' and Riders' Licences in force at 30th June.	Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total
	No.	No.	No.	No.	No.	No.	£	£	£	£
1938-39	562,271	258,025	79,237	899,533	129.09	1,238,497	6,318,435	508,387	257,652	7,084,474
1943-44	493,391	274,269	52,500	820,220	112.20	1,232,442	5,232,772	451,156	273,700	5,957,628
1944-45	505,782	290,961	57,239	853,982	115.52	1,180,589	5,354,624	484,376	300,435	6,139,435
1945-46	522,615	333,129	72,701	928,445	124.35	1,378,040	5,882,844	557,728	378,732	6,819,304
1946-47	550,400	375,646	86,712	1,012,758	133.59	1,499,765	6,562,232	633,993	476,001	7,672,226
1947-48	593,077	414,072	100,196	1,107,345	143.62	1,601,394	7,437,294	650,294	955,798	9,043,386

(a) Includes primary producers' vehicles, Victoria.

(iii) *Relation to Population.* The table hereunder shows the number of vehicles (excluding motor cycles) registered per 1,000 of population in each State at 31st December, 1921, and at 30th June for each of the years 1939 and 1944 to 1948 :—

MOTOR VEHICLES (EXCLUDING MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION.

(Excludes Defence Service Vehicles.)

Year.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
31st Dec., 1921 ..	15	16	8	24	12	13	(a)	..	15
30th June, 1939 ..	107	125	118	137	133	96	218	174	118
„ 1944 ..	91	114	112	131	110	94	167	128	105
„ 1945 ..	93	117	114	134	112	97	235	142	108
„ 1946 ..	99	123	124	143	122	100	318	147	115
„ 1947 ..	106	131	133	152	129	107	259	148	122
„ 1948 ..	114	140	140	162	137	115	249	149	131

(a) Not available.

(iv) *Revenue per Motor Vehicle.* The following table shows the average revenue per vehicle (excluding motor cycles) received in respect of registration and motor tax in the several States for the year 1938-39 and for each year from 1943-44 to 1947-48. In some States the revenue from motor tax on cycles is not separately recorded. In these cases an amount based on the flat rate provided for cycles in the registration acts has been deducted from the total revenue received, and the average amounts shown must therefore be regarded as approximate only. Registration fees and motor taxes were reduced, during the year 1941-42, in the States of New South Wales, Victoria and Western Australia. In South Australia the reduction was made in the last half of

1940-41. The reduction was generally 25 per cent., except in the case of New South Wales, where it was 20 per cent. In July, 1942 Australian Capital Territory fees were reduced by 15 per cent. For the State of Western Australia the 25 per cent. reduction in registration fees ceased to operate with the commencement of the 1947-48 registration year and the State of New South Wales has approved legislation to increase motor registration fees as from the end of the year 1949.

AVERAGE REVENUE PER VEHICLE FROM REGISTRATION FEES AND MOTOR TAX (EXCLUDING MOTOR CYCLES).
(£ s. d.)

State or Territory.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
New South Wales ..	7 19 10	7 16 6	7 13 8	7 15 7	7 18 11	8 1 3
Victoria ..	7 6 0	6 4 7	6 7 8	6 13 6	7 1 0	7 3 9
Queensland..	6 15 11	5 15 1	5 14 9	5 19 1	6 1 9	6 2 6
South Australia ..	7 9 10	6 2 3	6 4 2	6 6 8	6 8 6	6 8 6
Western Australia ..	6 6 0	6 0 5	5 9 5	5 8 1	5 9 4	8 11 9
Tasmania ..	6 13 3	7 13 10	7 18 5	7 19 6	8 0 4	8 1 8
Northern Territory ..	1 11 0	1 1 4	0 16 10	1 12 9	1 9 6	1 19 2
Aust. Cap. Territory ..	5 15 2	5 7 5	4 14 7	4 14 1	4 16 6	5 3 1
Australia ..	7 7 9	6 14 0	6 13 4	6 16 6	7 0 8	7 6 10

6. New Vehicles Registered.—(i) Year 1947-48. The following table shows the number of new vehicles registered in each State during 1947-48:—

NEW MOTOR VEHICLES REGISTERED, 1947-48.
(Excludes Defence Service Vehicles.)

Vehicles.	N.S.W.	Vic.	Q'land.	S.A.(b)	W.A.	Tas.	A.C.T.	Total. (b)
Motor cars ..	16,800	12,170	4,785	4,357	2,971	1,541	121	42,745
Commercial vehicles, etc. ..	9,427	(a)9,354	4,252	2,604	1,987	1,084	61	28,769
Motor cycles ..	4,451	3,140	1,958	2,697	1,059	621	42	14,308
Total ..	30,678	25,004	10,995	9,658	6,017	3,246	224	85,822

(a) Includes vehicles registered as primary producers' vehicles. (b) Excludes Northern Territory.

(ii) Years 1938-39 and 1943-44 to 1947-48. Particulars of the number of new vehicles registered in Australia during the years 1938-39 and 1943-44 to 1947-48 are shown in the following table:—

NEW MOTOR VEHICLES REGISTERED : AUSTRALIA.(a)
(Excludes Defence Service Vehicles.)

Vehicles.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Motor cars ..	54,107	825	899	2,123	21,237	42,745
Commercial vehicles, etc. (b)	24,027	12,635	7,654	8,686	16,317	28,769
Motor cycles ..	7,370	340	411	1,953	8,220	14,308
Total ..	86,404	13,800	8,964	12,762	45,774	85,822

(a) Excludes Northern Territory. (b) Includes vehicles registered as primary producers' vehicles, Victoria.

7. World Motor Vehicle Statistics, 1949.—The result of the 1949 World Motor Census, conducted by the *American Automobile* magazine, from which the following particulars have been extracted, shows that there were 57,502,898 motor cars, trucks and buses registered in various countries of the world at 1st January, 1949. This shows an increase of 8.8 per cent. on the figure for the previous year, 52,872,891, and is the highest figure attained to that date.

The following table shows the numbers of motor vehicles registered in each continent at 1st January, 1949 :—

MOTOR VEHICLES : WORLD REGISTRATIONS AT 1st JANUARY, 1949.

Continent, etc.	Total Automobiles.	Motor Cars.(a)	Motor Trucks and Buses.(a)
Africa	847,976	559,928	254,321
America (exclusive of United States of America).. .. .	3,475,524	2,324,460	1,057,200
United States of America	40,671,972	33,250,528	7,421,444
Asia	747,677	305,384	418,333
Europe	10,281,929	5,270,396	5,009,513
Oceania	1,477,820	984,342	488,812
Total	57,502,898	42,605,038	14,649,623

(a) Not complete for all territories.

The next table shows particulars of the numbers of motor vehicles registered in various countries, together with their approximate populations for the purposes of comparison :—

COMPARATIVE MOTOR VEHICLE STATISTICS, 1st JANUARY, 1949.

Country.	Approximate Population in Millions.	Motor Cars, Trucks and Buses.
Australia	8	1,064,775
Argentina	16	363,460
Canada	13	1,948,683
France	42	1,715,000
Germany	70	504,890
Great Britain	50	2,713,539
India-Pakistan	415	235,456
Italy	46	427,800
Japanese Empire	81	140,614
New Zealand	2	293,402
Union of South Africa	2	467,100
United States of America	147	40,671,972

The foregoing figures are in some cases approximations based on estimates furnished by Trade Commissioners or representative motor trade organizations in the several countries, and in other cases are incomplete.

8. Petrol Rationing.—A detailed account of the operations of petrol rationing in Australia from its inception in October, 1940, is contained in Official Year Books Nos. 36 and 37, Chapter V. The legality of petrol rationing was challenged in the High Court of Australia in May, 1949, and on the 6th June, 1949 the judgment of the Full High Court declared invalid petrol rationing under the National Security Regulations of the Commonwealth. The rationing of petrol throughout Australia by the Commonwealth Government automatically ceased from the date of the High Court judgment, but was re-introduced under State legislation in all States except Tasmania on 15th November, 1949. On 8th February, 1950 the new Prime Minister (the Rt. Hon. R. G. Menzies, K.C.) announced that rationing would cease as from the next day.

G. TRAFFIC ACCIDENTS.

1. General.—The practice of reporting accidents occurring in public thoroughfares is not uniform throughout Australia. In some States the reporting of minor accidents has not been enforced, while other States require that all accidents be reported. Hence the figures for each State are not entirely comparable with regard to the number of accidents, and to a lesser extent with regard to the number of persons injured.

2. Total Accidents Registered.—(i) Year 1947-48. The following table shows particulars of the number of persons killed and injured in accidents (known to the police) which occurred in public thoroughfares during 1947-48 :—

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : PERSONS KILLED AND INJURED, 1947-48.

State or Territory.	Accidents.	Persons Killed.			Persons Injured.		
		Number.	Per 1,000 of Mean Population.	Per 100 Motor Vehicles Registered.	Number.	Per 1,000 of Mean Population.	Per 100 Motor Vehicles Registered.
New South Wales	13,669	508	0.17	0.14	8,557	2.85	2.29
Victoria ..	14,285	362	0.18	0.11	7,210	3.49	2.24
Queensland ..	8,708	182	0.16	0.11	3,799	3.41	2.22
South Australia ..	11,845	128	0.20	0.11	2,927	4.49	2.43
Western Australia	5,885	127	0.25	0.16	668	1.31	0.84
Tasmania ..	4,109	40	0.15	0.12	838	3.20	2.45
Aus. Cap. Territory	195	1	0.06	0.03	63	3.60	2.11
Total ..	58,696	1,348	0.18	0.12	24,062	3.15	2.18

The ages of the persons killed and injured are given below :—

AGES OF PERSONS KILLED OR INJURED, 1947-48.

State or Territory.	Under 10 years.		10 to 59 years.		60 years and over.		Age not known.		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
N. S. Wales ..	(a) 48	(a) 834	(b) 321	b 6,897	139	826	..	..	508	8,557
Victoria ..	37	605	250	5,631	73	739	2	175	362	7,210
Queensland ..	(c) 26	(c) 506	(d) 125	d 2,976	31	301	..	16	182	3,799
South Aust. ..	(e) 13	(e) 393	(f) 82	f 2,113	33	280	..	141	128	2,927
Western Aust.	(e) 15	(e) 90	(f) 78	(f) 514	19	58	15	..	127	668
Tasmania ..	2	118	31	534	7	82	..	104	40	838
Aus. Cap. Terr.	..	4	1	58	..	1	..	..	1	63
Total ..	141	2,616	888	18,723	302	2,287	17	436	1,348	24,062

(a) Under 11.
(f) 16 to 59.

(b) 11 to 59.

(c) Under 15.

(d) 15 to 60.

(e) Under 16.

(ii) *Years 1938-39 and 1941-42 to 1947-48.* Approximate figures relating to the persons killed and injured in traffic accidents in Australia during the years 1938-39 and 1941-42 to 1947-48 are shown hereunder :—

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : PERSONS KILLED AND INJURED, AUSTRALIA.

Particulars.	1938-39.	1941-42.	1942-43.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Persons killed ..	1,433	1,297	1,340	1,089	1,011	1,270	1,346	1,348
„ injured ..	25,653	17,529	16,236	14,785	15,643	21,114	24,759	24,062

For further particulars of Traffic Accidents see *Transport and Communication Bulletin* No. 39.

H. AVIATION.

1. **Historical.**—A short review of the progress of civil aviation in Australia up to the date of foundation of a Civil Aviation Administration appears in Official Year Book No. 16, pp. 334-5.

2. **Foundation and Administration of Civil Aviation.**—A brief account of the foundation and objects of this Administration will be found in Official Year Book No. 19, p. 299. In 1936 the organization was changed and the responsibility of regulating and controlling civil aviation in Australia was entrusted to a Board, consisting of four members and a secretary. The Board was responsible to the Minister for Defence and continued to function as a unit of the Defence Department organization until November, 1938. In January, 1939 the Civil Aviation Board was abolished and the Civil Aviation Administration was made a separate Department under the Minister for Civil Aviation. The permanent Head of the Department is the Director-General of Civil Aviation.

The broad principles of the operations of the Administration of Civil Aviation are defined by Acts of Parliament and amplified by Regulations under the Acts. The more important relevant Acts and Regulations are (a) the Air Navigation Act and Regulations which prescribe the rules for the control of aircraft and air navigation ; (b) the Carriage by Air Act which gives effect to the International Convention for the unification of certain rules relating to International Carriage by Air ; and (c) the Quarantine (Air Navigation) Regulations which give effect to the International Sanitary Convention for Aerial Navigation.

The principal functions of the Administration are (a) the safety of civil flying ; (b) the licensing of pilots, ground engineers, navigators, and radio operators together with the supervision of all such work ; (c) the supervision of operations and licensing of airline companies for the carriage of mails, passengers, and freight ; (d) the making of contracts and payments of subsidies and payments for the carriage of mails ; (e) the construction and maintenance of aerodromes and seaplane bases and works in connexion therewith ; (f) the provision, operation, and maintenance of aeradio stations throughout Australia and Territories ; (g) the supervision of aircraft maintenance and aircraft design ; (h) the promotion of civil flying and training of pilots and ground staff ; and (i) liaison with international civil aviation organizations.

The organization is controlled from the head office in Melbourne, which directs the policy, planning, finance, and developmental aspects, and from out-stations throughout Australia and Papua-New Guinea at which are stationed the staff supervising aeradio, flight control, and maintenance.

A form of regional organization is under consideration by which a policy of decentralization will enable activities to be effected by a greater measure of local administrative control. In addition, certain field work could be undertaken by the proposed regional staff.

Early in 1946 the Department of Civil Aviation was reorganized so that it could more efficiently encompass its growing responsibilities. This reorganization continued during the period under review and at the time of going to press the work of the Department is divided into two main sections, Administrative and Technical. The three Administrative Divisions, under the control of an Assistant Director-General (Administrative) and their functions are shown below.

(i) *Division of Air Transport and External Relations.* The functions of this Division relate to the promotion and economic supervision of air transport, including the negotiation of contracts in respect of air services (covering routes, types of aircraft, frequencies of services, payments, mail arrangements, etc.); flying training and gliding; issue of operating licences; air route charges; planning of new services; non-scheduled flights; the collation, compilation and dissection of statistics relating to air transport; and the conduct of general inter-departmental and external relations, including international Empire Conventions, bilateral agreements with other countries; and Customs, Health and Immigration matters.

(ii) *Division of Administration and Personnel.* This Division is concerned with the co-ordination of all departmental personnel requirements and associated matters such as appointments, promotions, salary adjustments and application of Arbitration Awards; education and information services; maintenance and control of departmental libraries; staff welfare and office services; oversight of departmental correspondence records (registry) system; and general correspondence.

(iii) *Division of Finance and Stores.* This Division administers the financial aspects of the Department, including the keeping of Treasury and departmental accounts required in accordance with the provisions of the Audit Act, Treasury Regulations and Treasury Instructions. It also administers the Stores organization of the Department, covering the acquisition, storage, inspection in store and the accounting for, and the disposal of, all departmental stores and equipment, including aircraft, marine craft, vehicles and vehicular plant. Other functions are the general administration and control of departmental transport; the investigation of airline operators' financial activities (including the audit and investigation of books, accounts, records, etc.); the supervision of the expenditure incurred by Divisions under delegated powers, calling attention to any unauthorized, wasteful and uneconomic expenditure; and the departmental internal audit.

The functions of the three Technical Divisions administered by the Assistant Director-General (Technical) are described hereunder.

(i) *Division of Air Navigation and Safety.* This Division attends to the preparation, amendment and enforcement of all rules and regulations, etc., pertaining to air navigation, particularly from the aspect of safety; the issue of licences, certificates and approvals, and the undertaking of the necessary examinations, studies, tests, checks and inspections for their proper issuance and to ensure that the qualifications, techniques and conditions they cover are maintained during their currency; the checking of effectiveness of aids to navigation provided and operated by the Division of Airways, together with any procedures promulgated in this connexion; the advising, and co-operating with, Airways and Airports Divisions in the development of new projects, particularly from the aspect of safety control of the plans being developed by these Divisions; the study of all accidents and incidents, both in Australia and abroad, and the recommendations for prevention; the provision of material for publications relating to air navigation and safety; collaboration with other safety organizations and the dealing with any matters arising out of Empire or international standardization on the safety requirements of air navigation; the supervision from a safety aspect of operational requirements in respect of meteorological and hazard protection generally; in conjunction with the Superintendent of Education and Information, the education of both the Department and the

aviation industry in the latest and best safety practices; the supervision of aviation training activities; the prescription of physical standards, examinations, hours of duty and conditions of work of all aircrew personnel; and the prescription of standards relating to aircraft design and layout in so far as they react on the physical aspects of aircrew and passengers in aircraft.

(ii) *Division of Airways.* The functions of this Division cover the planning, specification, construction, maintenance and operation of all airway operational navigational elements, excluding such elements as come within the normal scope of architectural and civil engineering, and including recruitment, training and management of staff for the fulfilment of this objective; the maintenance of mechanical plant and equipment in departmental service, comprising electrical generating sets, motor vehicles, tractors and aerodrome maintenance plant, launches and marine equipment, and the operation of maintenance workshops; collaboration with the meteorological service; and the development and promotion of operational and navigational elements for the improvement of safety and efficiency of air navigation.

(iii) *Division of Airports.* This Division is concerned with airport planning and design, specification of airport works projects, maintenance of airports, seadromes and buildings and other projects of a dominantly civil engineering or architectural character; the specification of plant, tools and all departmental vehicles and equipment required for the maintenance of airports and departmental property; and the routine inspection and survey of all airports, seadromes and landing fields and the maintenance of up-to-date essential information concerning these fields for publication through the Divisions of Air Navigation and Safety and Administration and Personnel.

The Accident Investigation Branch is an independent section of Head Office, concerned mainly with major accidents. The Chief Inspector of Accidents Investigation and his team of experts are directly responsible to the Director-General.

3. *International Activity.*—(i) *International Civil Aviation Organization and South Pacific Air Transport Council.* A full report of the formation of the International Civil Aviation Organization, the Commonwealth Air Transport Council and the South Pacific Air Transport Council appears in Official Year Book No. 37.

Further depositions of ratification by the States during the year 1947-48 raised the membership of ICAO at 30th June, 1948 to 49. At the first Assembly Meeting of ICAO in 1947 Australia was elected to the Council for three years. The streamlining of entrance and clearance procedures was advanced a further step by the Second Session of the Facilitation Division of ICAO in May, 1948. In Australia the F.A.L. Co-ordinating Committee was formed in August, 1947, to co-ordinate the introduction of ICAO standards for Customs and similar procedures. The Commonwealth Departments of Trade and Customs, Health, Immigration, Postmaster-General, Civil Aviation and the Commonwealth Statistician, and all scheduled international airline companies operating in Australia are represented on the Committee. The Second Session of the F.A.L. Division ICAO adopted a resolution sponsored by Australia and supported by the United States, urging all contracting States to establish similar committees so that world-wide implementation of measures for the facilitation of international air transport would be hastened. The International Civil Aviation Organization established the Far East and Pacific Field Office in May, 1948, to replace the South West Pacific Mission which had been in existence since February, 1947.

The second meeting of the South Pacific Air Transport Council was held at Canberra during August, 1947. The United Kingdom, Fiji and the Western Pacific High Commission, New Zealand and Australia took part in the discussions.

(ii) *Oversea Air Services.* Negotiations for the purchase of the fifty per cent. Queensland and Northern Territory Aerial Services Ltd. shareholdings in Qantas Empire Airways Ltd. were successfully concluded, and from 1st July, 1947 Qantas Empire Airways became wholly owned by the Commonwealth Government. On 1st December, 1947 Qantas Empire Airways extended its service right through to London using Constellation aircraft. Survey flights in the South Pacific resulted in a number of regional

services to the islands. Since 1947 Qantas Empire Airways also operated an air service to Japan under charter to the Royal Australian Air Force. Following a survey flight from Sydney on 10th November, 1947, Qantas Empire Airways has operated a Catalina charter service to Lord Howe Island, and on 14th October, 1947 commenced a fortnightly service direct from Sydney to Norfolk Island.

In 1948, route-miles of Australian regular oversea airline services totalled 26,667. During this period Pan-American Airways continued to operate between San Francisco and Sydney.

The agreement between British Commonwealth Pacific Airlines Ltd. and Australian National Airways Pty. Ltd., under which Australian National Airways operated the trans-Pacific services, expired on 21st April, 1948, and British Commonwealth Pacific Airlines itself took over the operation of the service.

(iii) *International Airports, Customs and Quarantine Airports.* Representatives from the Departments of Trade and Customs, Health, Immigration, Civil Aviation and Air attended a conference convened in January, 1948, to consider the designation of international and customs airports. The conference also decided the actual areas to be the subject of close Customs, Health and Immigration supervision, and agreed on detailed co-operation between the staffs of the Departments.

(iv) *Air Transport Agreements concluded by Australia.* Qantas Empire Airways Constellation service to London began in December, 1947, necessitating the securing of traffic and transport rights in the various States en route. The French Government granted an Australian airline provisional traffic rights in Noumea pending formal transport agreement. In December, 1947 the Netherlands Government was formally advised that Australia considered as terminated the 1939 arrangement for the operation of air services between Australia and the Netherlands Indies, and suggested to that government a further temporary arrangement.

4. *Regular Air Services within Australia.*—During the year 1947-48 Australian air transport set new records for the carriage of passengers and freight, in spite of the limited number of aircraft available and the shortage of aviation fuel. The amount of freight carried was more than double the total for the previous year. Because of the shortage of aviation fuel the Department of Civil Aviation did not encourage the establishment of new services, but some operators were able to cover new routes by re-arranging schedules and affecting other economies in fuel consumption. From 1st November, 1947 permission to operate non-scheduled flights within Australia was approved only in the most essential cases.

To compensate the Department of Civil Aviation for the cost of maintaining air route facilities, a total of more than £1,000,000 a year, a scheme of charges for the use of Commonwealth aerodromes and facilities was introduced. The scheme made airline operators liable to a charge for each trip flown and imposed an annual fee on other aircraft owners. Details of the services in operation on the 30th June, 1948 are shown in *Transport and Communication Bulletin* No. 39, 1947-48.

5 *Air Ambulance Services.*—A brief statement of the foundation and objects of the Air Ambulance Services will be found in Official Year Book No. 32, pp. 145 and 146.

The Flying Doctor Service of Australia reported a major increase in the number of flights undertaken and miles flown during the year. Wireless transceivers linked with bases of operations now number 510. Telegrams transmitted through the radio communication system totalled 110,944. The Commonwealth Government's annual grant to this service amounted to £7,500 and was distributed by the Federal Council of the Flying Doctor Service of Australia. The Commonwealth Department of Health operates the Northern Territory Aerial Medical Service with two DH84 aircraft based at Darwin. During 1947-48 the service undertook twice as many flights as during the previous year. The Bush Church Aid Society for Australia and Tasmania, supported by funds from the Church of England, maintained one DH84 aircraft based at Ceduna, and one DH83 at Wudinna, South Australia. Both were busy during the year.

6. **Training of Air Pilots.**—A brief statement of the pre-war policy of the Commonwealth Government regarding assistance to Aero Clubs was given in Official Year Book No. 32, p. 146.

Early in 1948 negotiations were begun between the Associated Australian Aero Clubs and the Department of Civil Aviation to revise the scheme for financial assistance to the clubs, and a new basis of subsidy payment from 1st February, 1947 to June, 1951 was determined and approved by Cabinet.

Payment to the Clubs, under the revised scheme, has been made as follows:— (i) a maintenance grant (for each aircraft flown) at the following rates per hour subject to certain limitations—(a) at home base, £1, (b) away from home base, £1 10s.; (ii) an issue bonus (for each pupil trained “ab initio” to “A” Licence standard)—(a) at home base, £75, (b) away from home base, £90; (iii) a renewal bonus (for each licence renewed on club aircraft)—(a) at home base, £10, (b) away from home base, £12 10s.

In addition, the Commonwealth has accepted a contingent liability to contribute at the rate of 10s. per flying hour towards each club’s replacement reserve. This amount is intended to supplement the club’s reserve for the purchase of aircraft and spares specifically approved by the Department of Civil Aviation.

7. **Gliding Clubs.**—During 1947–48 the Government approved a grant of £1,000 for payment of subsidies to gliding clubs. Distribution was on an active membership basis.

8. **Airways Engineering.**—The backbone of any airways organization is an independent and reliable communications system, both between the various stations on the ground and between those ground stations and aircraft in the air. A comprehensive point-to-point communications network which includes teletype circuits linking Archerfield, Mascot, Rose Bay and Essendon has been installed, and, as traffic density grows, more circuits will be converted to teletypes. An international aeronautical fixed telecommunication service giving direct radio links with Auckland, Honolulu, Tontouta, Singapore, Batavia, Koepang, Ambon, Morotai, Manila, Guadalcanal and Nauru has also been established. Two international radio stations to handle this traffic have been built near Sydney and near Darwin. To improve communications with aircraft in flight, v.h.f. transmitters, which will ensure excellent reception under the worst conditions of static, have been installed. Initially, all Eastern aeradio stations have been equipped; but ultimately aircraft throughout Australia will use these channels for talking to the ground.

Australia has acquired a number of new 112 m.c. v.h.f. radio ranges, which have been installed at 30 locations along the main air routes, intended for regular use by the end of 1949. During 1947, engineers of the Department of Civil Aviation and the Commonwealth Scientific and Industrial Research Organization developed the Multiple Track Radar Range and Radar Distance Measuring Equipment. Radar Distance Measuring has been adopted for use on all Australian air routes. Tenders were called for 89 ground stations, which will be entirely automatic in operation and will cover an area of 2,000,000 square miles, thus ensuring that almost every aircraft flying anywhere in Australia will be within range of at least one of these beacons.

There is published monthly by the Department of Civil Aviation a handbook entitled “ANFAC” in which are shown details of all communication and navigation aids available for aircraft flying in Australia and the South Pacific.

At all the principal airports, electrically operated runway lighting systems have been installed to define runways to be used for night landings. These installations are being extended both in scope and location. The later equipments, now being installed, have the lighting fittings flush with the runway surface thus eliminating possible obstruction to aircraft and the light output is being directionally focussed to provide greater range of visibility in the desired direction.

9. **Air Traffic Control.**—During the year 1947-48 Air Traffic Control organization became a permanent establishment. The opening up of new units, the density of air traffic, and the additional responsibilities given to the Air Traffic Control service have necessitated the increase of employees to 145. Australia and New Guinea have been divided into a number of Flight Information Regions, each having an Air Traffic Control Centre controlling traffic on specific routes and providing flight information to all aircraft operating within the Region. Approach Control Services are located at Essendon, Mascot and Archerfield, the centres where greatest traffic density occurs. New units have recently been installed at Canberra and Rockhampton. Approach Control Procedures and Instructions which have been on trial for some months were consolidated and produced as a manual. A new edition of the *Manual for Air Traffic Control* was distributed in March, 1948. The Air Traffic Control School was active during the year. These courses are the first step in a plan to achieve standardization throughout the Australian sphere of influence.

10. **Meteorological Aids to Civil Aviation.**—Professional meteorological officers of the Department of the Interior are on duty at 36 of Australia's 59 aeradio stations. At the remainder, communications personnel make local weather observations, and take barometer and thermometer readings for transmission to Area Meteorological Offices.

11. **Airports and Landing Grounds.**—During the year 1947-48, 41 new aerodrome licences were issued and maintenance grants paid to the proprietors of 73 airfields. The number of current licensed (non-Government) airports and airfields at 30th June, 1948 was 240. In addition, there were 133 Government aerodromes, 49 emergency landing grounds, 5 flying boat bases and 6 emergency alighting areas.

12. **Construction and Development of Airports.**—Australia's adoption of international standards made it necessary to bring all Australian international airports to these requirements. Similar standards were applied to the principal airports along Australia's domestic air routes.

Since the end of the war, substantial improvements have been made to 28 airports and temporary passenger accommodation has been provided at eleven airports. To avoid taking material from housing, no permanent passenger handling facilities have been constructed since the war.

Kingsford-Smith Airport.—Work continued during the year on the construction of Australia's largest and most important airport. The first stage, estimated to cost £5,000,000, involves the construction of two runways and has necessitated the diversion of Cook's River and the moving of millions of cubic yards of filling.

Essendon Airport.—There has been some progress in the construction of taxiways and additional apron area. Small allocations of cement, which eventually ceased, necessitated the completion of the 79-degree runway in flexible pavement, instead of concrete as planned. Work on roads within the building area continued, but much still remains to be done.

Moorabbin.—Melbourne's second airport has been laid out and work on runways and buildings commenced. Requisitions totalling £191,000 have been placed with the Department of Works and Housing.

13. **Aircraft Parts and Materials.**—The production of aircraft components and materials in Australia has increased considerably during recent years, so that many aircraft requirements can now be met by local production. Two hundred and ninety-two firms and organizations are authorized by the Department of Civil Aviation to issue release notes with their aircraft products, certifying that they have been manufactured to designs and specifications approved by the Department of Civil Aviation.

14. **Aircraft Maintenance Certificates of Repair.**—Aircraft maintenance repair and overhaul is now carried out under the supervision of a works inspection section or licensed ground engineer in workshops approved by the Department of Civil Aviation. Workshops are authorized to issue certificates of repair which serve as evidence to the licensed

ground engineer responsible for the fitment of the part that the work so covered has been done in an authorized workshop by competent tradesmen and has been subjected to proper inspection. Such specialized work as the overhaul of instruments, electrical equipment, aeronautical pumps and carburettors is carried out by these approved workshops.

15. **Test and Examination of Aircraft Parts and Materials.**—A number of laboratories has now been approved by the Department of Civil Aviation and authorized to issue laboratory reports covering the physical test, chemical analysis, radiological and metallurgical examination of materials and parts used in connexion with the civil aircraft industry.

16. **Statistical Summaries.**—(i) *Registrations, Licences, Accidents, etc.* The following table provides a summary of the civil aviation registrations and licences in force in Australia at 30th June of each of the years 1939 and 1944 to 1948, and also of the numbers of persons killed and injured in civil flying accidents during the years 1938-39 and 1943-44 to 1947-48.

CIVIL AVIATION : REGISTRATIONS, LICENCES, ACCIDENTS, ETC., AUSTRALIA.

Particulars.		Year ended 30th June—					
		1939.	1944.	1945.	1946.	1947.	1948.
Registered Aircraft Owners(a)	No.	149	116	125	182	323	334
Registered Aircraft(a)	..	296	185	206	349	643	670
Pilots' Licences(a)—							
Private	.. ..	1,096	159	215	320	(b) 600	614
Commercial	.. ..	346	305	428	1,019	(b) 499	495
Student	.. ..	..	..	..	..	(b) 939	1,114
1st Class Airline Transport	..	..	..	..	..	(b) 341	361
2nd " " "	..	..	..	..	..	(b) 25	35
3rd " " "	..	..	..	..	..	(b) 372	360
Navigators' Licences(a)	..	59	96	125	223	..	..
Flight Navigator	..	..	..	..	..	(b) 72	84
Cadet	..	..	..	..	..	(b) 10	12
Radio Operators' Licences—							
Aircraft Radio Telegraph Operator	(a)	75	111	160	401	..	..
Aircraft Radio Telephone Operator	(a)	..	64	146	238	..	..
1st Class Flight Radio Telegraphy Operator	..	..	..	..	..	(b) 80	106
1st Class Flight Radio Telephony Operator	..	..	..	..	..	(b) 559	590
2nd Class Flight Radio Telephony Operator	..	..	..	..	..	(b) 192	211
3rd Class Flight Radio Telephony Operator	..	..	..	..	..	(b) 5	6
Flight Engineers' Licences—							
Flight Engineer	..	..	..	..	..	(b) 8	16
Cadet	..	..	..	..	..	..	..
Ground Engineers' Licences(a)	..	525	1,039	1,122	1,226	(b) 1,660	1,660
Aerodromes(a)—							
Government	.. ..	71	69	77	96	(b) 131	133
Public	.. ..	213	206	230	230	(b) 243	240
Emergency grounds	.. ..	147	78	83	73	(b) 54	49
Accidents—							
Persons Killed	.. ..	38	1	26	44	15	13
.. Injured	.. ..	15	1	10	1	17	27

(a) At 30th June. (b) At 1st April, 1948; new categories in accordance with standards of the International Civil Aviation Organization.

(ii) *Operations of Regular Internal Services.* The next table summarizes the flying activities of regular internal services operating within Australia during the years 1938-39 and 1943-44 to 1947-48.

CIVIL AVIATION : OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA.

Particulars.		Year ended 30th June—					
		1939.	1944.	1945.	1946.	1947.	1948.
Hours flown	No.	39,312	75,068	93,055	127,808	154,772	212,233
Miles	'000	5,302	9,704	12,632	17,676	23,098	32,377
Paying Passengers	No.	41,429	215,845	320,377	509,190	849,647	1,207,839
Paying Passenger-miles	'000	22,423	99,754	141,197	224,909	366,150	503,494
Freight—							
Actual tons	No.	391	1,318	2,339	5,021	12,247	25,845
Ton-miles	'000	(a)	786	1,132	2,363	5,972	11,920
Mail—							
Actual tons	No.	(b) 64	(b) 3,238	(b) 3,762	2,148	1,120	1,248
Ton-miles	'000	(a)	2,397	2,493	1,549	621	674

(a) Not available.

(b) Net weight.

NOTE.—Figures shown for 1939 and 1944 to 1946 include Oversea Services of Qantas Empire Airways Ltd., but exclude operations of aircraft chartered for defence purposes.

(iii) *Operations of Australian and International Oversea Services.* The following table furnishes a summary of the Australian and international oversea services operating between Australia and oversea countries, including Pacific islands, during the years 1938-39 and 1943-44 to 1947-48. For details of the individual services and routes see *Transport and Communication Bulletin* 1947-48, No. 39.

CIVIL AVIATION : OPERATIONS OF AUSTRALIAN AND INTERNATIONAL OVERSEA SERVICES.

Particulars.		Year ended 30th June—					
		1939.	1944.	1945.	1946.	1947.	1948.
Route-miles	No.	6,985	(a) 6,425	(b) 15,969	(c) 10,471	(d) 19,459	(d) 26,667
Hours flown	"	12,686	6,860	11,561	22,645	32,633	39,488
Miles flown	'000	1,736	922	1,789	4,265	5,921	7,555
Paying passengers	No.	5,350	4,101	8,137	15,702	31,055	41,124
Paying passenger-miles	'000	7,335	6,216	14,708	32,905	75,225	122,678
Freight—							
Actual tons	No.	6	29	70	152	349	660
Ton-miles	'000	(e)	56	168	406	978	2,630
Mail—							
Actual tons	No.	(e)	83	264	564	465	638
Ton-miles	'000	(e)	176	730	2,032	2,112	3,408

(a) Includes Qantas Empire Airways Ltd. service, Perth-Karachi. (b) Includes Sydney-Karachi (Lancastrian) service. (c) Perth-Karachi and Sydney-Karachi service routed via Singapore. (d) Includes British Commonwealth Pacific Airlines Service, Sydney-Vancouver. (e) Not available.

17. *New Guinea Activities.* Issues up to and including No. 34, 1941 show particulars of the development of civil aviation in New Guinea and of the companies operating at the outbreak of war with Japan, while subsequent issues carry the accompanying statistical summary of operations up to the end of September, 1941. Similar statistics of post-war operations, however, are not at present available.

During 1947-48 Qantas Empire Airways Ltd. operated a regular service from Australia to Lae and Rabaul. Commercial aircraft operators located at Lae maintained passenger and freight carrying services to Wau, Bulolo, Mt. Hagan, Kainantu, Garoka, Finschhafen, Madang, Wewak, Aitape, Maprik and Angoram. Charters were undertaken to other places as occasion arose.



Mails to all areas except Bougainville are now serviced by air. In addition to the weekly Australia-Port Moresby-Lae-Rabaul service, Qantas Empire Airways Ltd. in 1947-48 conducted an air service Lae-Rabaul-Kavieng-Manus and return, thus providing a bi-weekly service from Australia and Papua to Rabaul. The Royal Australian Air Force operated, approximately monthly, a service between Port Moresby and Manus Island which enabled all Manus surface mails ex-Australia routed via Port Moresby to be cleared by air.

I. POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

§ 1. General.

1. The Commonwealth Postal Department.—Under the provisions of the Commonwealth Post and Telegraph Act 1901, the Commonwealth Postal Department was placed under the control of the Postmaster-General, being a responsible Minister. The Director-General of Posts and Telegraphs controls the Department under the Postmaster-General, whilst the principal officer in each State is the Deputy-Director of Posts and Telegraphs.

The considerable expansion of postal business of all kinds is reflected in the gross revenue of the Department which in 1947-48 was 81 per cent. greater than in 1938-39.

2. Postal Facilities.—(i) *Relation to Area and Population.* The following statement shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices) in each State and in Australia at 30th June, 1948. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office as well as the number of inhabitants per office should be taken into account. In this and all succeeding tables the returns given for South Australia include those for the Northern Territory, and the returns for the Australian Capital Territory are included in those for New South Wales.

POSTAL FACILITIES: RELATION TO AREA AND POPULATION, AT 30th JUNE, 1948.

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
Number of post offices (a) ..	2,501	2,470	1,250	348	613	200	8,194
Number of square miles of territory to each office in State ..	124	36	536	1,066	1,592	52	363
Number of inhabitants to each office	1,216	846	902	791	841	515	941
Number of inhabitants per 100 square miles ..	981	2,379	168	74	53	1,001	259

(a) Includes "official," "semi-official," and "non-official" offices.

The foregoing table does not include "telephone" offices at which there is no postal business.

(ii) *Number of Offices.* The following table shows the number of post offices in each State for the years 1918, 1928, 1938 and 1948.

NUMBER OF POST OFFICES.

State.	At 30th June—							
	1918.		1928.		1938.		1948.	
	Official and Semi-Official.	Non-Official.	Official and Semi-Official.	Non-Official.	Official and Semi-Official.	Non-Official.	Official and Semi-Official.	Non-Official.
New South Wales ..	466	2,113	455	2,228	433	2,088	460	2,044
Victoria ..	277	2,327	286	2,462	260	2,295	281	2,189
Queensland ..	204	1,098	215	1,064	187	1,055	201	1,049
South Australia ..	135	678	146	657	143	646	148	700
Western Australia ..	125	494	130	559	126	486	133	480
Tasmania ..	47	434	47	471	42	470	45	464
Australia ..	1,254	7,144	1,279	7,441	1,200	7,040	1,268	6,926

(iii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States in the years 1918, 1928, 1938 and 1948 is given in the following table :—

POSTAL EMPLOYEES AND MAIL CONTRACTORS.

State.	At 30th June—							
	1918.		1928.		1938.		1948.	
	Em- ployees.	Mail Con- tractors.	Em- ployees.	Mail Con- tractors.	Em- ployees.	Mail Con- tractors.	Em- ployees.	Mail Con- tractors.
Central Office ..	92	..	170	..	320	..	722	..
New South Wales ..	11,684	1,972	13,856	1,947	15,933	2,463	26,183	2,303
Victoria ..	8,249	1,105	10,950	1,142	12,628	1,465	19,267	1,208
Queensland ..	4,477	794	5,504	870	5,914	1,464	10,515	1,324
South Australia ..	2,737	368	4,144	413	3,814	371	6,179	448
Western Australia ..	2,462	271	2,883	358	3,228	386	4,581	409
Tasmania ..	1,212	250	1,509	236	1,673	225	2,474	223
Australia ..	30,913	4,760	39,016	4,966	43,510	6,374	69,921	5,915

3. **Gross Revenue, Branches—Postmaster-General's Department.** The gross revenue (actual collections) in respect of each branch of the Department during each of the years 1943-44 to 1947-48 in comparison with 1938-39 is shown in the table hereunder:—

POSTMASTER-GENERAL'S DEPARTMENT : GROSS REVENUE.

(£'000.)

Branch and Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Postal—							
1938-39 ..	3,048	2,042	1,067	552	502	211	7,422
1943-44 ..	4,047	3,062	2,031	1,001	720	302	11,163
1944-45 ..	4,222	3,195	2,259	1,021	736	321	11,754
1945-46 ..	4,454	3,425	1,935	930	790	344	11,878
1946-47 ..	5,004	3,759	1,780	984	861	410	12,798
1947-48 ..	5,363	4,001	1,815	1,075	925	395	13,574
Telegraph—							
1938-39 ..	502	341	234	118	139	38	1,372
1943-44 ..	952	949	724	251	221	41	3,148
1944-45 ..	1,030	1,022	639	223	225	47	3,186
1945-46 ..	1,173	901	738	216	234	59	3,321
1946-47 ..	1,114	865	411	231	224	60	2,905
1947-48 ..	1,061	833	422	224	228	66	2,834
Wireless—							
1938-39 ..	198	152	59	53	36	18	516
1943-44 ..	249	189	79	67	42	23	649
1944-45 ..	253	193	81	68	44	22	661
1945-46 ..	250	200	83	70	46	23	672
1946-47 ..	294	236	98	76	52	26	782
1947-48 ..	296	234	102	83	56	27	798
Telephone—							
1938-39 ..	3,261	2,352	1,098	696	431	202	8,040
1943-44 ..	4,645	3,434	1,699	988	656	298	11,720
1944-45 ..	4,825	3,620	1,805	1,031	677	313	12,271
1945-46 ..	5,003	3,703	1,838	1,052	661	327	12,584
1946-47 ..	5,410	3,870	1,830	1,136	708	363	13,317
1947-48 ..	5,666	4,166	1,992	1,220	752	388	14,184
All Branches—							
1938-39 ..	7,009	4,887	2,458	1,419	1,108	469	17,350
1943-44 ..	9,903	7,634	4,533	2,307	1,639	664	26,680
1944-45 ..	10,330	8,030	4,784	2,343	1,682	703	27,872
1945-46 ..	10,880	8,229	4,594	2,268	1,731	753	28,455
1946-47 ..	11,822	8,730	4,119	2,427	1,845	859	29,802
1947-48 ..	12,386	9,234	4,331	2,602	1,961	876	31,390
Total revenue per capita—							
	£	£	£	£	£	£	£
1938-39 ..	2.55	2.61	2.44	2.36	2.37	1.97	2.50
1943-44 ..	3.43	3.85	4.30	3.68	3.43	2.72	3.67
1944-45 ..	3.54	4.02	4.48	3.70	3.47	2.85	3.79
1945-46 ..	3.69	4.08	4.24	3.54	3.53	3.01	3.83
1946-47 ..	3.97	4.28	3.75	3.73	3.71	3.37	3.96
1947-48 ..	4.10	4.46	3.89	3.92	3.85	3.35	4.11

Compared with the corresponding figures for the previous year, an increase of 5.3 per cent. is shown in the gross revenue earned for the year 1947-48. Increases in the several branches were as follows:—Postal 6.1 per cent., Wireless 2.0 per cent. and Telegraph 6.5 per cent. Gross revenue of the Telegraph Branch decreased by 2.4 per cent.

The gross revenue in 1947-48 was 80.9 per cent. higher than in the last complete pre-war year, 1938-39, the corresponding percentage increases for the several branches being as follows:—Postal 82.9, Telegraph 106.6, Wireless 54.7, and Telephone 76.4.

4. **Expenditure, Postmaster-General's Department.**—(i) *Distribution.* The following table shows, as far as possible, the distribution of expenditure (actual payments) on various items in each State during the year ended 30th June, 1948, as shown by records kept for Treasury purposes. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

**POSTMASTER-GENERAL'S DEPARTMENT : DISTRIBUTION OF EXPENDITURE,
1947-48.
(£'000.)**

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Expenditure from Ordinary Votes—								
Salaries and payments in the nature of salary ..	137	4,984	3,701	2,063	1,218	845	461	13,409
General expenses ..	35	455	359	148	84	57	32	1,170
Stores and material ..	7	297	199	121	48	48	24	744
Mail services ..	(a)1,612	650	350	345	178	119	53	3,307
Engineering services (other than New Works) ..	239	3,328	2,315	1,270	723	551	313	8,819
Other services ..	406	..	..	..	..	..	..	406
Total ..	2,436	9,714	7,004	3,947	2,251	1,620	883	27,855
Rent, repairs, maintenance, fittings, etc. ..	..	113	110	54	33	20	6	336
Proportion of audit expenses ..	..	5	4	2	1	1	..	13
Other expenditure ..	..	5	7	..	..	13	..	25
Capital Works and Services (b)—								
Telegraph, telephone and wireless ..	23	2,922	2,099	1,019	631	490	170	7,354
New Buildings, etc. ..	..	274	278	166	72	65	11	866
Other expenditure not allocated to States ..	(c)3,942	..	..	..	..	..	..	3,942
Grand Total ..	(d)6,401	13,033	9,502	5,188	2,988	2,209	1,070	40,391

(a) Expenditure on air-mail services etc. (b) Includes expenditure from loan. (c) Particulars of apportionment to States not available. Includes superannuation contributions, £575,103; sinking fund payments, £1,857,680; interest on loans, £984,404; exchange, £396,143; and loan redemption, etc., expenses, £57,985. (d) Includes expenditure not apportioned to States.

A similar table for the year 1946-47 is contained in the *Transport and Communication Bulletin* No. 38, p. 52.

(ii) *Total 1938-39 and 1943-44 to 1947-48.* The next table shows the actual payments made for each of the years 1943-44 to 1947-48 compared with the year 1938-39:—

**POSTMASTER-GENERAL'S DEPARTMENT : EXPENDITURE.
(£'000.)**

1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
18,874	25,415	27,389	29,010	32,724	40,391

The total expenditure increased by 23.4 per cent. during 1947-48 and was 114.0 per cent. higher in 1947-48 than in 1938-39.

5. *Profit or Loss, Postmaster-General's Department.*—(i) *States, 1947-48.* The foregoing statements of gross revenue and expenditure represents actual collections and payments made and cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch in the several States, after providing for working expenses, including superannuation, pensions and depreciation and interest charges including exchange were as follows:—

**POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, 1947-48.
(£'000.)**

Branch.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Postal ..	643	712	2	150	102	14	1,623
Telegraph ..	— 155	— 89	— 55	4	— 21	— 10	— 326
Wireless ..	— 201	— 228	— 131	— 40	— 69	— 28	— 697
Telephone ..	710	449	173	7	13	71	1,250
All Branches ..	1,006	844	— 11	107	— 1	— 95	1,850

NOTE.—Minus sign (—) indicates loss.

After making provision for the items referred to above, the year 1947-48 closed with a surplus of £1,849,781, compared with a surplus of £5,103,886 in 1946-47 and of £3,625,371 in 1938-39.

(ii) *Branches, 1938-39 and 1943-44 to 1947-48.* The following statement shows particulars of the operating results of each branch for the years 1938-39 and 1943-44 to 1947-48 :—

POSTMASTER-GENERAL'S DEPARTMENT : PROFIT OR LOSS, BRANCHES.

(£'000.)

Year.	Branch Profits—				
	Postal.	Telegraph.	Wireless.	Telephone.	All Branches.
1938-39.. ..	2,105	52	76	1,392	3,625
1943-44.. ..	2,336	952	— 24	3,033	6,297
1944-45.. ..	2,572	939	— 127	3,291	6,675
1945-46.. ..	2,268	996	— 144	3,058	6,178
1946-47.. ..	2,841	148	— 419	2,534	5,104
1947-48.. ..	1,623	— 326	— 697	1,250	1,850

NOTE.—Minus sign (—) indicates loss.

6. **Fixed Assets.**—(i) *Details, 1947-48.* The following statement shows particulars of the fixed assets of the Postmaster-General's Department from 1st July, 1947 to 30th June, 1948 :—

POSTMASTER-GENERAL'S DEPARTMENT : FIXED ASSETS.

(£'000.)

Particulars.	Net Value, 1st July, 1947.	Capital Expendi- ture, 1947-48.	Gross Value, 30th June, 1948.	Less Deprecia- tion, etc., 1947-48. (a)	Net Value, 30th June, 1948
Telephone service plant (excluding trunk lines)	59,178	6,958	66,136	680	65,456
Joint trunk and telegraph plant (aerial wires, conduits, and cables)	17,182	932	18,114	94	18,020
Telegraph service plant	887	162	1,049	11	1,038
Wireless service plant	1,363	142	1,505	1	1,504
Postal service plant	611	28	639	..	639
Sites, buildings, furniture and office equipment	13,783	974	14,757	121	14,636
Miscellaneous plant	2,479	704	3,183	195	2,988
Total	(b)95,483	9,900	105,383	1,102	104,281

(a) Includes dismantled assets, depreciation written off, and assets transferred. (b) Includes £497,541, the value of Shepparton Radio Station taken over by the Postmaster-General's Department, not included in the figure for 1947 below.

(ii) *Net Value 1938-39 and 1943-44 to 1947-48.* The following table shows the net value of the fixed assets of the Postmaster-General's Department at 30th June, 1939 and 1944 to 1948 :—

POSTMASTER-GENERAL'S DEPARTMENT : NET VALUE OF FIXED ASSETS.

(£'000.)

At 30th June—

1939.	1944.	1945.	1946.	1947.	1948.
65,135	79,912	83,645	88,540	94,986	104,281

At 30th June, 1948 the net value of fixed assets was 60.1 per cent. greater than at 30th June, 1939.

§ 2. Posts.

1. *Postal Matter Dealt With.*—(i) *Australia.* The following table is a summary of the postal matter dealt with in Australia during the five years 1943-44 to 1947-48 in comparison with 1938-39. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the number dispatched is included in the following table, which consequently shows the number of distinct articles handled :—

POSTAL MATTER DEALT WITH : AUSTRALIA.

Year.	Letters, Postcards and Letter-cards.		Newspapers and Packets.		Parcels (a)		Registered Articles other than Parcels.	
	Total ('000.)	Per 1,000 of Population. No.	Total ('000.)	Per 1,000 of Population. No.	Total ('000.)	Per 1,000 of Population. No.	Total ('000.)	Per 1,000 of Population. No.

POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.

1938-39 (b)	..	830,243	120,005	139,035	20,138	9,056	1,300	7,474	1,078
1943-44	..	862,758	118,646	152,301	20,944	17,924	2,465	17,182	2,363
1944-45	..	882,960	120,146	165,114	22,467	17,758	2,416	18,175	2,473
1945-46	..	869,212	116,987	162,398	21,857	16,017	2,156	17,783	2,393
1946-47	..	918,252	122,108	180,307	23,977	16,237	2,159	18,596	2,473
1947-48	..	966,586	126,513	193,413	25,315	17,525	2,294	18,553	2,428

TOTAL POSTAL MATTER DEALT WITH.

1938-39 (b)	..	903,090	130,245	105,362	23,849	9,585	1,382	8,371	1,207
1943-44	..	907,768	124,836	170,044	23,384	18,945	2,605	17,524	2,410
1944-45	..	932,143	126,839	184,860	25,154	18,956	2,579	18,682	2,542
1945-46	..	942,402	126,838	185,598	24,980	19,345	2,604	18,800	2,530
1946-47	..	984,367	130,900	210,343	27,971	20,252	2,693	19,859	2,641
1947-48	..	1,030,835	135,708	228,057	29,607	21,880	2,804	19,013	2,600

(a) Includes registered, c.o.d. and duty parcels.

(b) Packets were included with letters.

(ii) *States.* The next table shows the postal matter dealt with in each State during the year 1947-48.

POSTAL MATTER DEALT WITH : STATES 1947-48.(a)

State.	Letters, Postcards, and Letter-cards.		Newspapers and Packets.		Parcels.(b)		Registered Articles other than Parcels.	
	Total ('000).	Per 1,000 of Population.	Total ('000).	Per 1,000 of Population.	Total ('000).	Per 1,000 of Population.	Total ('000).	Per 1,000 of Population.
New South Wales	374,981	123,998	89,836	29,707	6,831	2,259	8,121	2,685
Victoria ..	278,720	134,702	46,200	22,327	4,561	2,204	4,933	2,384
Queensland ..	127,209	114,322	27,319	24,552	3,264	2,933	2,519	2,264
South Australia ..	81,792	123,256	10,765	16,222	1,518	2,288	1,275	1,921
Western Australia	60,987	119,850	13,153	25,848	1,083	2,128	1,024	2,012
Tasmania ..	42,897	163,866	6,140	23,455	268	1,024	681	2,601
Australia ..	966,586	126,513	193,413	25,315	17,525	2,294	18,553	2,428

POSTED FOR DELIVERY WITHIN AUSTRALIA.

State.	Letters, Postcards, and Letter-cards.		Newspapers and Packets.		Parcels.(b)		Registered Articles other than Parcels.	
	Total ('000).	Per 1,000 of Population.	Total ('000).	Per 1,000 of Population.	Total ('000).	Per 1,000 of Population.	Total ('000).	Per 1,000 of Population.
New South Wales	11,106	3,673	4,785	1,582	1,344	444	410	136
Victoria ..	11,097	5,363	2,789	1,348	1,408	680	103	50
Queensland ..	1,847	1,660	607	626	362	325	59	53
South Australia ..	1,601	2,413	383	577	352	530	21	32
Western Australia	3,551	6,978	683	1,342	300	500	50	116
Tasmania ..	291	1,112	36	138	106	405	41	157
Australia ..	29,493	3,860	9,373	1,227	3,872	507	603	91

POSTED FOR DELIVERY OVERSEAS.

State.	Letters, Postcards, and Letter-cards.		Newspapers and Packets.		Parcels.(b)		Registered Articles other than Parcels.	
	Total ('000).	Per 1,000 of Population.	Total ('000).	Per 1,000 of Population.	Total ('000).	Per 1,000 of Population.	Total ('000).	Per 1,000 of Population.
New South Wales	21,166	6,999	12,513	4,137	219	72	377	125
Victoria ..	12,267	5,928	6,178	2,986	135	65	137	66
Queensland ..	3,008	2,784	2,530	2,274	58	52	40	36
South Australia ..	2,203	3,320	2,005	3,112	30	45	29	44
Western Australia	1,394	2,739	1,838	3,614	32	63	77	151
Tasmania ..	628	2,399	1,047	4,000	9	34	7	26
Australia ..	40,756	5,334	26,171	3,425	483	63	667	87

(a) See explanation in para. 1.—(i).

(b) Includes registered, c.o.d. and duty parcels.

Comparable figures of the number of articles dealt with during 1946-47 may be found in the *Transport and Communication Bulletin* No. 39, pp. 55-58.

2. **Cash on Delivery Parcels Post.**—(i) *General.* The Postal Department undertakes, upon prepayment of a prescribed commission, to deliver registered articles sent by parcel post within Australia, or between Lord Howe Island, Norfolk Island, Nauru, the Territory

of Papua-New Guinea, or Fiji and Australia, to recover from the addressee on delivery a sum of money specified by the sender, and to remit the sum to the sender. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment.

(ii) *Summary of Business.* The next statement shows particulars regarding the cash on delivery parcels posted in each State for the years 1943-44 to 1947-48 in comparison with 1938-39 :—

CASH ON DELIVERY PARCELS POST : SUMMARY OF BUSINESS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
NUMBER OF PARCELS POSTED.							
1938-39 ..	332,419	36,000	175,376	20,596	67,852	849	633,092
1943-44 ..	359,500	79,100	147,200	28,400	36,400	1,300	651,900
1944-45 ..	377,100	72,300	159,200	37,800	41,100	1,500	689,000
1945-46 ..	401,900	53,500	192,200	41,800	48,000	1,500	738,900
1946-47 ..	483,300	54,300	245,900	49,400	59,000	1,900	893,800
1947-48 ..	491,800	62,200	285,500	60,100	68,200	2,600	970,400

VALUE COLLECTED.

(£)

1938-39 ..	405,844	50,224	226,409	22,962	76,323	1,143	782,905
1943-44 ..	518,268	154,896	223,106	44,849	48,645	2,351	992,115
1944-45 ..	521,647	146,062	260,638	52,774	55,126	2,375	1,038,622
1945-46 ..	691,019	113,484	317,918	69,284	64,108	2,498	1,258,311
1946-47 ..	950,395	140,533	404,268	95,928	92,502	3,194	1,686,820
1947-48 ..	939,815	148,052	522,655	113,499	114,597	4,506	1,843,124

REVENUE INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.

(£)

1938-39 ..	45,097	4,867	24,881	2,587	8,207	102	85,741
1943-44 ..	49,283	13,575	19,135	4,566	4,225	151	90,935
1944-45 ..	52,526	12,654	20,400	6,010	4,750	167	96,507
1945-46 ..	54,220	8,635	25,598	6,019	5,526	177	100,175
1946-47 ..	68,886	10,395	32,705	7,422	6,765	220	126,393
1947-48 ..	67,237	9,611	40,964	10,780	9,272	316	138,230

The number and value of parcels forwarded in New South Wales and Queensland are much higher than in any of the other States, although the system has also found favour in South Australia and Western Australia. These States have the largest areas, and consequently more people at long distances from business centres avail themselves of the cash on delivery system.

3. *Sea-borne Mail Services.*—In earlier issues of this work particulars of sea-borne mail services were included, but the insertion of the information terminated with Official Year Book No. 22.

4. **Total Cost of Carriage of Mails.**—During 1940-47 and 1947-48 the total amounts paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, were as follows (1946-47 in parentheses):—Inland mails—Road £990,005 (£845,507), Railway £496,869 (£469,465), Air £570,065 (£554,543); Coastwise mails—£17,404 (£18,690); Oversea mails—Sea £694,749 (£476,239), Air £645,588 (£604,186); Grand Total £3,414,680 (£2,968,630).

5. **Transactions of the Dead Letter Offices.**—During the year 1947-48 there were, in the several States of Australia, 1,442,808 letters, post cards and lettercards returned to writers or delivered, 160,983 destroyed in accordance with the Act, and 84,537 returned to other States or countries as unclaimed—a total of 1,688,328. Corresponding particulars for packets and circulars were—366,998, 137,728, 22,241 and 526,967. There were 2,215,295 articles handled in all, and they contained money and valuables amounting to £309,769.

6. **Money Orders and Postal Notes.**—(i) *General.* The issue of money orders and postal notes is regulated by Sections 74-79 of the Post and Telegraph Act 1901. The maximum amount for which a single money order payable within Australia may be obtained is £40 but additional orders will be issued upon request when larger amounts are to be remitted. The maximum amount permitted to be sent to any person in the sterling area is £8 per month but varying conditions apply for remittance to countries outside the sterling area. A postal note, which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings.

(ii) *States, 1947-48.* Particulars regarding the business transactions in each State for 1947-48 are shown hereunder:—

MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, 1947-48.

State.	Value of Money Orders Issued.	Value of Money Orders Paid.	Net Money Order Commission Received.	Value of Postal Notes Issued.	Poundage Received on Postal Notes.
	£'000.	£'000.	£	£'000.	£
New South Wales ..	14,043	14,355	66,632	4,384	89,363
Victoria ..	6,767	7,405	32,279	3,526	83,820
Queensland ..	4,128	4,106	22,111	1,034	21,585
South Australia ..	1,891	1,769	10,293	789	18,199
Western Australia ..	1,872	1,833	10,159	548	11,720
Tasmania ..	1,098	1,004	5,198	246	5,813
Australia ..	29,799	30,532	146,672	10,527	230,509

(iii) *Australia, 1938-39 and 1943-44 to 1947-48.* The next table shows the number and value of money orders and postal notes issued and paid in Australia in each of the years 1943-44 to 1947-48 compared with 1938-39:—

MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, AUSTRALIA.

Year.	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
1938-39 ..	'000.	£'000.	'000.	£'000.	'000.	£'000.	'000.	£'000.
1943-44 ..	3,239	18,349	3,254	18,548	21,942	7,926	21,966	7,934
1944-45 ..	3,609	29,945	3,627	29,987	21,865	9,432	21,793	9,453
1945-46 ..	3,545	27,020	3,427	27,123	22,727	9,554	22,562	9,493
1946-47 ..	3,508	27,051	3,530	27,274	22,614	9,178	22,622	9,228
1947-48 ..	3,653	27,918	3,662	28,348	24,864	9,536	24,710	9,512
	3,898	29,799	3,952	30,532	26,517	10,527	26,353	10,469

(iv) *Classification of Money Orders Issued and Paid.* Of the total money orders issued in Australia during 1947-48, 3,822,221 valued at £29,559,302 were payable in Australia, 15,094 (£37,823) in New Zealand, 40,348 (£121,659) in the United Kingdom and 20,138 (£80,674) in other countries. Of the total money orders paid in Australia during 1947-48, 3,785,851 (£29,804,552) were issued in Australia, 21,887 (£52,180) in New Zealand, 104,127 (£467,945) in the United Kingdom and 36,770 (£207,386) in other countries.

Money orders payable or issued in foreign countries, which have been sent from or to Australia through the General Post Office in London, are included in those payable or issued in the United Kingdom.

(v) *Postal Notes Paid.* The following table shows the number and value of postal notes paid in each State during 1947-48. Particulars regarding the number and value of postal notes issued and paid in each of the last five years have been given in the previous table.

POSTAL NOTES PAID : STATE OF ISSUE, 1947-48.

Issued in—	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Same State No. '000	8,479	4,724	1,951	1,039	1,041	498	17,732
Value £'000	3,803	1,949	786	435	424	178	7,575
Other States No. '000	1,067	848	642	151	481	5,432	8,621
Value £'000	447	377	266	71	96	1,637	2,894
Total No. '000	9,546	5,572	2,593	1,190	1,522	5,930	26,353
Value £'000	4,250	2,326	1,052	506	520	1,815	10,479

§ 3. Telegraphs.

1. *General.*—A review of the development of the Telegraph Services in Australia appears in Official Year Book No. 15, p. 625. During the past few years substantial improvements in both the speed and grade of telegraph service throughout Australia have been effected, the entire system being subjected to intensive reorganization. The external circulation system of the Australian telegraph service has been considerably modified, direct communication having been established between cities and towns which formerly were served through intermediate repeating centres. The voice frequency telegraph carrier wave system, which, introduced during 1935, has now superseded the supra-acoustic carrier wave system, has been extended to all the principal interstate and intra-State routes and 763,944 miles of uni-directional voice frequency telegraph carrier wave channels are now in operation. Direct telegraph communication over great distances is rendered possible by the telegraph system in Australia, one of the greatest being Sydney Perth, 2,708 miles. In order to speed up transmission, machine printing telegraph systems have been introduced between capital cities and between important country centres. Murray multiplex machine apparatus provides telegraph outlets which permit the carriage of very heavy loads with a minimum transit time.

Telephone subscribers may telephone telegrams for onward transmission, or have messages telephoned to them. The fee for the service is small, and the system means, in effect, that the telegraph system is brought into the home of every telephone subscriber. The number of telegrams lodged by telephone during the year ended 30th June, 1948 was 7,309,731 or 21.1 per cent. of the total lodgments.

A radiogram service is provided to certain isolated places throughout Australia and a number of privately operated wireless transceiver stations has been established at various centres throughout the Commonwealth, enabling telegrams to be exchanged with departmental telegraph offices. Stations sponsored by the Flying Doctor Service of Australia can communicate by wireless with base stations (*see also Air Ambulance Services, p. 200*).

The picturegram service between Melbourne and Sydney, which was established in 1929, but which was suspended during September, 1942, will be restored and extended as soon as the necessary equipment is obtained from the United Kingdom. The overseas photo-telegram service between Sydney or Melbourne and England has been extended to New Zealand. During the year 1947-48, 685 picturegrams were received from places overseas and 26 despatched from Australia to overseas countries.

The appropriately designed decorative telegraph stationery for use in conveying Christmas and New Year greetings, Mother's Day messages and other congratulatory messages, withdrawn in 1942, will be re-introduced as soon as the paper supply position will permit. The embargo on the lodgment of Christmas, New Year and Mother's Day greeting telegrams was removed in December, 1945.

The teleprinter service (i.e. typewriting over electrical circuits), introduced in 1933, combines the speed of the telegraph and the flexibility and personal touch of the telephone with the accuracy and permanency of the printed word and affords the great advantage of direct and instantaneous communication between points within the same building or separated by distances up to thousands of miles. Printergram services are also available connecting any business premises with the local telegraph office for the transmission and reception of telegrams. At 30th June, 1948, 226 private wire services utilizing more than 124,000 uni-directional channel miles of communication links were in use. These figures include 167 teleprinter and teletype private wire services utilizing 440 machines.

2. **Telegraphs and Telephones—Length of Wire.**—The following table shows, for the year ended June, 1948, the combined single wire mileage for both telegraph and telephone purposes in each State. The lengths of conduits and pole routes are also shown.

TELEGRAPHS AND TELEPHONES : MILEAGES, 1947-48.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.
Cables—							
Exchange aerial, underground and submarine .. single wire miles '000	1,244	969	352	259	179	65	3,068
Trunk telephone and telegraph—							
Aerial and underground single wire miles '000	39	56	5	9	8	2	119
Submarine .. " " 1 (a)	1	(a)	(a)	(a)	(a)	(a)	1
Total .. " "	1,284	1,025	357	268	187	67	3,188
Conduits .. duct miles '000	7	5	2	1	2	(a)	17
Aerial wires—							
Telephone, trunk and/or telegraph purposes .. single wire miles '000	133	87	108	63	46	16	453
Exchange and non-exchange service lines .. single wire miles '000	177	136	77	76	32	21	519
Total .. " "	310	223	185	139	78	37	972
Pole routes .. total miles '000	33	20	16	15	12	4	100

(a) Less than 500 miles.

3. **Telegraph Offices and Telegrams Dispatched within Australia.**—(i) *States.* The following table shows, for each State in 1947-48, the number of telegraph offices (including railway telegraph offices), and of telegrams dispatched to places within the Commonwealth and to adjacent islands and to ships at sea according to the class of message transmitted:—

TELEGRAPH OFFICES AND TELEGRAMS DISPATCHED, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Telegraph Offices(a)							
No.	3,065	2,429	1,725	883	960	537	9,599
Messages ('000)—							
Paid and Collect—							
Ordinary	10,195	7,195	4,584	2,332	2,778	717	27,801
Urgent	1,011	410	328	114	110	38	2,011
Press	136	57	67	29	49	17	355
Lettergram	27	22	16	16	22	8	111
Radiogram	35	3	33	24	31	1	127
Total	11,404	7,687	5,028	2,515	2,990	781	30,405
Unpaid—							
Service	228	124	143	47	66	29	637
Meteorological	597	325	1,074	1,061	450	143	3,650
Total	825	449	1,217	1,108	516	172	4,287
Grand Total	12,229	8,136	6,245	3,623	3,506	953	34,692

(a) At 30th June.

A comparative table for the year 1946-47 may be found in the *Transport and Communication Bulletin* No. 38, p. 60.

(ii) *Australia.* The numbers of telegraph offices and of telegrams dispatched to destinations within Australia and to adjacent islands and to ships at sea, for each of the years 1938-39 and 1943-44 to 1947-48, were :—

TELEGRAPH OFFICES AND TELEGRAMS DISPATCHED : AUSTRALIA.

Particulars.		1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Telegraph offices	No.	9,389	9,521	9,523	9,426	9,458	9,599
Telegrams dispatched	'000	17,252	33,357	35,474	35,971	33,729	34,692

The volume of telegraph business has increased by over 101 per cent. since the year 1938-39.

§ 4. Oversea Cable and Radio Communication.

1. **First Cable Communication with the Old World.**—In earlier issues of the Official Year Book will be found a detailed account of the connexion of Australia with the Old World by means of submarine cables. (*See* No. 6, p. 770.)

2. **General Cable Service.**—Descriptions of the various cable services between Australia and other countries are given in Official Year Book No. 22, pp. 335-6.

3. **Merging of Cable and Wireless Interests.**—Following upon the recommendations of the Imperial Wireless and Cable Conference in London in 1928 which examined the situation that had arisen as the result of the competition of the beam wireless with the cable services, the Imperial and International Communications Limited (since renamed Cable and Wireless Ltd.) was formed and took over the operations of the Pacific Cable Board and the control of the Eastern Extension Cable Company and the Marconi Wireless Company. For further developments, leading eventually to the establishment of the Overseas Telecommunications Commission, *see* Official Year Book No. 37, pp. 220-4.

4. **Oversea Cable and Radio Traffic.**—(i) *States.* The number of telegrams received from and dispatched overseas in each State during 1947-48 is shown hereunder :—

INTERNATIONAL TELEGRAMS, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Number received ..	528,858	368,912	41,912	43,109	53,712	10,573	1,047,076
.. dispatched	520,652	330,937	51,220	49,834	57,231	13,522	1,023,396
Total ..	1,049,510	699,849	93,132	92,943	110,943	24,095	2,070,472

(ii) *Australia.* (a) *Number of Telegrams.* The following table shows the number of international telegrams received from and dispatched overseas during the years 1938-39 and 1943-44 to 1947-48 :—

INTERNATIONAL TELEGRAMS : AUSTRALIA.

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number received ..	716,007	1,098,606	979,237	1,023,889	944,115	1,047,076
.. dispatched ..	745,754	1,363,588	1,116,050	1,045,602	987,260	1,023,396
Total ..	1,461,761	2,462,194	2,095,287	2,069,491	1,931,375	2,070,472

(b) *Number of Words, 1947-48.* The following statement shows particulars of the international business, originating and terminating in Australia, transacted over the cable and wireless services during the year ended 30th June, 1948 :—

INTERNATIONAL TELEGRAMS : AUSTRALIA, 1947-48.
(^{'000 Words.})

Class of Traffic.	Number of Words Transmitted to—			Number of Words Received from—		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary (a) ..	1,786	2,993	4,779	1,528	2,558	4,086
Deferred ordinary ..	3,252	4,111	7,363	2,797	2,982	5,779
Government (a) ..	1,028	1,779	2,807	1,858	2,309	4,167
Press (including deferred press) ..	1,628	2,971	4,599	7,932	5,245	13,177
Daily letter ..	2,952	6,604	9,646	2,907	6,602	9,599
Other ..	920	703	1,623	974	794	1,768
Total ..	11,566	19,251	30,817	18,086	20,490	38,576

(a) Includes code telegrams.

Words transmitted to "Other places" included 4,128,000 to the United States of America and 5,637,000 to New Zealand and the Pacific Islands. Words received from "Other places" included 3,924,000 from the United States of America and 4,246,000 from New Zealand and the Pacific Islands.

5. *Cable and Beam Wireless Rates.*—Previous issues contained particulars of the rates per word applicable to the various classes of international telegrams. The publication of this information in the Year Book has been discontinued.

§ 5. Telephones.

1. *General.*—Particulars of the total mileage of lines used exclusively for telephone purposes are not now available, but are combined with all other line mileage. A table showing the total single wire mileage used for telephone trunk and or telegraph purposes is shown in § 3 on page 217.

During 1947-48 the total number of telephones added to the post office system was 58,137, compared with 49,100 in 1946-47. With an average of 128 telephones per 1,000 of population, Australia continues to hold a high place amongst the countries of the world in respect of telephone density. Details of the total telephone installations throughout the world are shown in paragraph 7, page 223.

Fifty-five carrier wave telephone systems were installed during 1947-48 on trunk line routes serving capital cities and important provincial centres. The number of carrier systems now in service totals 356, representing a channel mileage of 235,876.

The plan to convert the manual exchanges in the metropolitan networks to automatic working was adversely affected during the year ended June, 1948, owing to interruption to deliveries of automatic exchange equipment which had been on order for long periods, the difficulties associated with the erection of new buildings to accommodate the apparatus, and the shortage of skilled man-power. However, 13 automatic exchanges were established during the year ended June, 1948. At 30th June, 1948 there were 151 automatic exchanges in the metropolitan area and 168 in the country districts to which 579,137 telephones were connected representing 61 per cent. of the total number in use in Australia. The establishment of automatic switching units which have been designed to meet the special needs of rural communities was also retarded by the effects mentioned

above, with the result that two manually operated exchanges only were replaced by automatic switching units during 1947-48. There were 155 of these units in service at the end of June, 1948 and work is proceeding to enable many more additional exchanges to be established. The difficulty in obtaining equipment from the overseas manufacturers will retard the post-war plans to provide an additional 400 units in country areas.

2. Summary for States.—Particulars relating to the telephone service in each State for the years ended 30th June, 1947 and 1948 compared with 1939 will be found in the following table:—

TELEPHONE SERVICES : SUMMARY.

Particulars.	Year (30th June).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
		No.	No.	No.	No.	No.	No.	No.
Exchanges ..	1939	2,010	1,680	1,053	579	653	358	6,333
	1947	2,036	1,672	1,106	604	639	362	6,419
	1948	2,053	1,679	1,117	611	654	362	6,476
Telephone Offices (in- cluding Exchanges)	1939	3,040	2,358	1,517	829	907	509	9,160
	1947	3,058	2,409	1,569	894	893	503	9,326
	1948	3,065	2,412	1,602	906	920	503	9,408
Lines connected ..	1939	189,915	150,570	61,650	45,224	26,032	14,144	487,535
	1947	253,215	202,709	82,561	56,449	33,812	19,070	647,876
	1948	267,765	214,997	89,839	60,249	35,607	19,891	688,348
Instruments con- nected	1939	257,246	208,230	82,226	60,451	35,830	18,013	661,996
	1947	353,283	287,303	113,814	77,388	48,185	25,044	905,017
	1948	374,891	305,287	122,989	82,726	50,963	26,298	963,154
(i) Subscribers' in- struments	1939	250,511	203,668	79,293	58,512	34,380	17,098	643,462
	1947	344,630	280,834	109,919	75,076	40,332	23,975	880,766
	1948	365,942	298,495	118,858	80,308	49,022	25,191	937,816
(ii) Public tele- phones	1939	4,223	2,573	1,775	1,017	926	562	11,076
	1947	5,023	3,058	2,035	1,145	898	578	12,737
	1948	5,140	3,143	2,110	1,189	920	581	13,083
(iii) Other local in- struments	1939	2,512	1,989	1,158	922	524	353	7,458
	1947	3,630	3,411	1,860	1,167	955	491	11,514
	1948	3,809	3,649	2,021	1,220	1,021	526	12,255
Instruments per 100 of population	1939	9.32	11.09	8.08	10.03	7.62	7.59	9.50
	1947	11.77	13.98	10.29	11.78	9.59	9.74	11.94
	1948	12.32	14.60	10.91	12.34	9.80	10.02	12.49
Earnings ..		£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
	1939	3,371	2,409	1,136	709	450	209	8,281
	1947	5,617	4,042	1,928	1,172	729	370	13,858
	1948	6,043	4,306	2,076	1,254	775	401	14,855
Working expenses ..	1939	2,119	1,488	691	543	365	204	5,410
	1947	3,936	2,734	1,454	913	612	359	10,008
	1948	4,846	3,512	1,728	1,148	720	438	12,392
Percentage of working expenses on earn- ings	1939	%	%	%	%	%	%	%
	1939	62.87	61.75	60.80	76.58	81.13	97.94	65.31
	1947	70.07	67.64	75.41	77.90	83.95	97.03	72.22
	1948	80.19	81.56	83.24	91.55	92.00	100.23	83.42

Of the total telephones (963,154) in service on 30th June, 1948, 352,077 or 37 per cent. were connected to exchanges situated beyond the limits of the metropolitan telephone networks. The number of telephone offices, including exchanges, increased by 82 during the year 1947-48, bringing the total in Australia to 9,408.

3. *Subscribers' Lines and Calling-rates.*—The next table shows the number of subscribers' lines and the daily calling-rates at central, suburban and country telephone exchanges in the several States for 1947-48 :—

TELEPHONES : SUBSCRIBERS' LINES AND DAILY CALLING-RATE, 1947-48.

State.	Central Exchanges.		Suburban Exchanges.		Country Exchanges.	
	Subscribers' Lines Connected.	Average Outward Calls Daily per line.	Subscribers' Lines Connected.	Average Outward Calls Daily per line.	Subscribers' Lines Connected.	Average Outward Calls Daily per line.
New South Wales ..	24,915	12.40	140,348	4.96	88,539	2.75
Victoria ..	16,765	8.15	120,435	4.31	69,795	1.99
Queensland ..	8,913	10.85	31,192	4.07	42,879	2.90
South Australia ..	6,749	10.09	26,040	3.27	22,371	1.95
Western Australia ..	7,856	8.36	13,201	3.82	12,115	2.09
Tasmania ..	4,379	5.49	2,983	2.89	11,231	2.45

Similar information for the year 1946-47 may be found in the *Transport and Communication Bulletin* No. 38, p. 64.

A comparison of the average daily calling-rates for each class of exchange shows that New South Wales registered the greatest number of calls per line at central and suburban exchanges and Queensland at country exchanges.

.. *Effective Paid Local Calls.*—The numbers of effective paid local calls from subscribers and public telephones in the various States during the years ended 30th June, 1947 and 1948 appear hereunder :—

TELEPHONES : NUMBER OF EFFECTIVE PAID LOCAL CALLS.

('000.)

State.	Subscribers' Calls.		Calls from Public Telephones.		Total Calls.	
	1946-47.	1947-48.	1946-47.	1947-48.	1946-47.	1947-48.
New South Wales ..	305,611	330,527	40,989	42,639	346,600	373,166
Victoria ..	215,541	231,016	20,697	21,397	236,238	252,413
Queensland ..	83,420	91,417	9,590	9,892	93,010	101,309
South Australia ..	54,875	57,280	7,085	7,280	61,960	64,560
Western Australia ..	38,917	41,150	3,380	3,626	42,297	44,776
Tasmania ..	16,343	17,605	1,761	1,795	18,104	19,400
Australia ..	714,707	768,995	83,502	86,629	798,209	855,624

In 1938-39 subscribers' calls numbered 551,511,000, calls from public telephones 44,683,000, and total local calls 596,194,000.

5. **Trunk Line Calls and Revenue.**—In the next table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the years 1946-47 and 1947-48 compared with 1938-39.

TELEPHONES : TRUNK LINE CALLS AND REVENUE.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia
Total Calls—	'000.	'000.	'000.	'000.	'000.	'000.	'000.
1938-39 ..	14,401	11,198	7,306	4,166	2,311	1,770	41,152
1946-47 ..	20,059	16,792	10,113	5,709	3,015	2,806	58,494
1947-48 ..	21,368	17,558	10,829	6,125	3,339	3,065	62,284
Total Revenue—	£	£	£	£	£	£	£
1938-39 ..	739,472	529,190	412,811	196,780	126,141	73,634	2,078,028
1946-47 ..	1,411,475	1,038,090	761,478	404,461	215,112	145,406	3,976,022
1947-48 ..	1,520,953	1,098,648	820,765	446,514	240,641	162,655	4,290,176
Average Revenue per call—	d.	d.	d.	d.	d.	d.	d.
1938-39 ..	12.32	11.34	13.56	11.34	13.09	9.98	12.12
1946-47 ..	16.89	14.84	18.07	17.00	17.12	12.44	16.31
1947-48 ..	17.08	15.02	18.19	17.49	17.29	12.73	16.53

The number of trunk line calls during 1947-48 increased by more than 3½ millions, or 6.5 per cent., compared with the figures for the previous year, whilst the average revenue per call increased slightly.

6. **Revenue from Telephones.**—Particulars regarding the revenue from telephone services are included in tables in § 1.

7. **World Telephone Statistics, 1948.**—The following table, derived, in the main, from statistics compiled by the American Telephone and Telegraph Company shows the number of telephones in use in the principal countries of the various continental areas of the world. Data are presented as far as possible as at 1st January, 1948. Estimates have been used where current official statistics could not be obtained.

SUMMARY OF TELEPHONES IN THE WORLD AS AT 1st JANUARY, 1948.

Telephones in Countries of the World.			
Country.	Number.	Per cent. of World Total.	Per 100 of Population.
North America—	'000.		
Canada	2,213	3.7	17.4
United States of America	34,867	57.5	24.2
Other	504	0.8	1.0
Total	37,584	62.0	18.0
South America—			
Argentina	651	1.1	4.0
Brazil	469	0.8	1.0
Other	369	0.6	0.9
Total	1,489	2.5	1.4

SUMMARY OF TELEPHONES IN THE WORLD AS AT 1ST JANUARY, 1948
—continued.

Country.	Telephones in Countries of the World.		
	Number.	Per cent. of World Total.	Per 100 of Population.
Europe—	1,000		
Belgium	535	0.9	6.3
Denmark	618	1.0	14.8
France	2,108	3.5	5.2
Germany	1,753	2.9	3.3
Italy	959	1.6	2.1
Netherlands	576	1.0	5.9
Spain	510	0.8	1.8
Sweden	1,451	2.4	21.2
Switzerland	745	1.2	16.3
United Kingdom	4,655	7.7	9.3
Other	3,807	6.2	1.1
Total	17,717	29.2	3.0
Asia—			
Japan	1,195	2.0	1.5
Other	605	1.0	
Total	1,800	3.0	0.2
Africa—			
Union of South Africa	335	0.6	2.9
Other	325	0.5	
Total	660	1.1	0.4
Oceania—			
Australia(a)	905	1.5	11.9
New Zealand	301	0.5	16.5
Other	144	0.2	
Total	1,350	2.2	1.3
Grand Total	60,000	100.0	2.6

(a) As at 30th June, 1947.

Among the countries listed by the American Telephone and Telegraph Company (more than 60) Australia, with a rate of 11.9, ranked ninth in order of telephones per 100 of population. This related to telephones in Australia as at 30th June, 1947; at 30th June, 1948, the number of telephones was 963,154 and the rate 12.5 per 100, and at 31st January, 1949 the number was 1,000,491 and the rate 12.8 per 100.

§ 6. Radio Telegraphy and Telephony.

1. **General.**—A statement in regard to the initial steps taken to establish radio telegraphy in Australia appears in Official Year Book No. 18, p. 343.

2. **Wireless Licences and Services.**—(i) *Radiocommunication Stations Authorized.* A change has been made in the arrangement of the statistics of the different classes of the wireless licences issued by the Postmaster-General's Department for stations in the States and Territories of the Commonwealth. Particulars now refer to "stations authorized" instead of "licences issued". The change has been made necessary mainly because of the need for inclusion of certain stations authorized in recent times, but for which licences have not been issued (e.g., stations established by the Postmaster-General's Department, services conducted by the Administration of Papua-New Guinea and aeronautical stations of the Department of Civil Aviation). Another factor in the change is that, in a number of instances, single licences have been issued for a group of stations. Figures representing stations authorized for use in ships and in aircraft are shown separately as totals for the Commonwealth and Territories combined, as it is no longer practicable to classify them according to States, etc., as hitherto.

Figures in the following table relate to radio-communication (radio telegraph and radio telephone) stations only; particulars of broadcasting stations and of broadcast listeners are shown in pars. (ii) and (iii) following.

RADIOCOMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1948.

State for which Authorized.	Class of Station.									
	Transmitting and Receiving.						Receiving Only.			Grand Total.
	Aero-nautical.(a)	Coast. (b)	Land. (c)	Mobile (General).(d)	Miscellaneous.	Total.	Land. (c)	Mobile (General).(d)	Total.	
New South Wales	8	1	176	499	33	717	72	36	108	825
Victoria ..	4	1	122	351	11	489	202	132	334	823
Queensland ..	14	6	201	127	9	357	29	82	111	468
South Australia	6	1	99	58	4	168	..	..	..	168
Western Australia	12	5	180	71	7	275	28	7	35	310
Tasmania ..	5	1	27	9	3	45	..	..	..	45
Northern Territory	5	1	92	29	..	127	..	..	..	127
Aust. Cap. Terr...	1	..	5	43	1	50	..	2	2	52
Total, Australia	55	16	902	1,187	68	2,228	331	259	590	2,818
Papua ..	1	2	43	21	..	67	..	..	..	67
New Guinea ..	3	6	64	..	..	73	..	..	..	73
Grand Total ..	59	24	1,009	1,208	68	2,368	331	259	590	(e)2,958

(a) Ground stations (aeradio stations) for communication with aircraft stations. (b) Ground stations for communication with ship stations. (c) Stations established at fixed locations on land for the conduct of point-to-point services and for communication with mobile stations. (d) Stations installed in motor vehicles and small harbour vessels not falling within the definition of ship stations or aircraft stations and stations comprising small portable apparatus used for various purposes. (e) Excludes 168 aircraft stations and 345 ship stations (see above).

(ii) *Broadcast Licences Issued, 1947-48.* The following table shows, for the year ended 30th June, 1948, the number of broadcast licences issued in each State and Territory of the Commonwealth.

BROADCAST LICENCES ISSUED, 30th JUNE, 1948.

State in which Issued.		Class of Licence.				
		Broadcasting.		Broadcast Listener's.		Experi- mental.
		National Stations.	Commercial Stations.	One Receiver.	More than one Receiver.	
New South Wales	..	7	35	646,976	48,526	906
Victoria..	..	(a) 7	19	469,437	35,669	796
Queensland(b)	..	(a) 11	20	230,028	9,314	273
South Australia	..	3	8	175,232	21,104	261
Western Australia	..	(a) 6	11	120,240	8,463	171
Tasmania	..	3	8	57,568	5,512	91
Northern Territory	..	1	..	967	23	13
Australian Capital Territory	..	1	1	3,522	235	13
Total	..	39	102	1,703,970	128,846	2,524

(a) Includes Short Wave Stations: Victoria 3 Queensland 1 and Papua 1; Western Australia 1.

(b) Includes Papua.

(iii) *Broadcast Listeners' Licences.* The striking development of the use of the radio in Australia is illustrated by the following table, which shows the number of broadcast listeners' licences in force at 30th June, 1925, 1930, 1935, 1939, 1940 and 1944 to 1948 :—

NUMBER OF BROADCAST LISTENERS' LICENCES.

In force at 30th June—	N.S.W. (a)	Victoria.	Q'land. (b)	S. Aust. (c)	W. Aust.	Tasmania.	Australia.
1925 ..	33,719	19,243	1,061	3,118	3,417	501	61,059
1930 ..	111,080	139,887	23,263	25,671	5,715	6,032	311,648
1935 ..	278,648	236,886	67,369	76,365	41,176	20,088	720,532
1939 ..	433,029	327,579	133,217	117,307	79,262	39,392	1,129,786
1940 ..	458,155	348,158	151,110	124,891	87,764	42,182	1,212,260
1944(d) ..	560,032	409,325	180,090	155,253	99,246	50,356	1,454,302
1945 ..	570,312	412,317	184,341	160,210	102,065	50,557	1,479,802
1946 ..	575,864	415,785	191,186	164,724	106,529	51,992	1,506,080
1947 ..	679,505	499,944	228,066	180,909	121,149	61,674	1,771,247
1948 ..	699,259	505,106	239,342	197,326	128,703	63,080	1,832,816

(a) Includes Australian Capital Territory.

(b) Includes Papua.

(c) Includes Northern Territory.

(d) Commencing in July, 1942, licences for receivers in excess of one are included.

3. *Broadcasting.*—(i) *The National Broadcasting Service.* The technical services for the National Broadcasting System are provided by the Postmaster-General's Department, and the programmes by the Australian Broadcasting Commission (*see* Chapter XXVIII.—Miscellaneous.)

At the 30th June, 1948, the National Broadcasting System of Australia comprised 39 transmitting stations as follows :—

Medium-wave Stations—

2FC and 2BL Sydney, 2NC Newcastle, 2NA Newcastle, 2CO Corowa, 2NR Lawrence, 2CR Cumnock, 2CY Canberra, 3LO and 3AR Melbourne, 3GI Longford, 3WV Dooen, 4QG and 4QR Brisbane, 4AT Atherton, 4QB Pinalba, 4QL Longreach, 4QN Clevedon, 4RK Rockhampton, 4QS Dalby, 5CL and 5AN Adelaide, 5CK Crystal Brook, 5DR Darwin, 6WF and 6WN Perth, 6WA Minding, 6GF Kalgoorlie, 6GN Geraldton, 7ZL and 7ZR Hobart, 7NT Kelso, 9PA Port Moresby.

Short-wave Stations—

VLG, VLH and VLR Lyndhurst, Victoria, VLQ Brisbane, Queensland, VLW Perth, Western Australia, VLT Port Moresby.

With the exception of the short-wave stations, all transmitters operate in the medium frequency broadcast band 550 to 1,500 kilocycles per second. From the short-wave stations, using frequencies within the band 6 to 20 megacycles per second, service is given to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, Northern Territory, and Northern and Central Queensland.

In addition to the short-wave stations under the National Broadcasting System the Department of Information operates three short-wave stations at Shepparton, Victoria (VLA, VLB, VLC) for oversea services only.

Programmes for country regional stations are normally relayed from the central studio of the nearest capital city, high quality programme transmission lines being used for the purpose. A number of programme channels is utilized to link national broadcasting stations in the capital cities of Australia, and frequently this system is extended to connect both the national and commercial broadcasting stations.

(ii) *Broadcast Listeners' Licences.*—(1) The general position regarding the fees payable for broadcast listeners' licences is as follows :—(a) For a single receiver possessed by a person, Zone 1, £1 ; Zone 2, 14s. ; (b) for receivers in excess of one possessed by a person, Zone 1, 10s., Zone 2, 7s.

(2) Free licences are granted to blind persons and to schools. Invalid and age pensioners who live alone or with another such pensioner are required to pay only half the ordinary fees, i.e. :—(a) For a single receiver, Zone 1, 10s. ; Zone 2, 7s. ; (b) for receivers in excess of one, Zone 1, 5s. ; Zone 2, 3s. 6d.

Zone 1 is the area within 250 miles of a National Broadcasting Station. Zone 2 is the remainder of the Commonwealth.

Under the Australian Broadcasting Act 1942-1946 the Australian Broadcasting Commission received the following amounts (in parentheses) out of the fee for each broadcast listener's licence :—20s. (11s.), 14s. (11s.), 10s. (5s. 6d.), 7s. (5s. 6d.), 5s. (3s.), 3s. 6d. (3s.).

The foregoing procedure was repealed, however, by an amendment to the Australian Broadcasting Act, assented to on the 6th December, 1948, whereby the Commission shall prepare estimates of its receipts and expenditure for each financial year and submit these estimates to the Minister. Appropriations shall be made by Parliament for the purposes of the Commission which, together with all other moneys received by the Commission, shall be paid into an account in the Commonwealth Bank of Australia. From this account all costs, charges, expenses, etc., incurred by the Commission in the exercise of its powers and functions under the Act shall be defrayed.

(iii) *Commercial Broadcasting Stations.* The services of other broadcasting stations are conducted by private enterprise under licence from the Postmaster-General. Licences are granted on conditions which ensure satisfactory alternative programmes for listeners. The fee for a broadcasting station licence is £25 per annum, plus one-half of one per cent. of the gross earnings from the operations of a station which has made a profit in the year preceding. The maximum initial period of a licence is three years, and it is renewed for a period of one year at the discretion of the Postmaster-General. Licensees of these stations do not share in the listeners' licence fees, but rely for their income on revenue received from the broadcasting of advertisements and other publicity. The number of these stations in operation at 30th June, 1948, was 102 and there are other stations in prospect.

(iv) *Radio Inductive Interference.* The Postmaster-General's Department takes active measures to suppress, so far as possible, interference with broadcast reception resulting from the radiations of energy from electrical machinery and appliances. During the year 1947-48, 8,830 instances of interfering noises were eliminated with the co-operation of the owners of the offending equipment.

(v) *Prosecutions under the Wireless Telegraphy Act.* During the year 1947-48, 3,045 persons were convicted for using unlicensed broadcast receiving equipment. The total fines and costs amounted to £8,403.

4. *Overseas Communication by Wireless.*—(i) *Beam Radio Telegraph.* The beam wireless stations provided for under the agreement between the Commonwealth Government and Amalgamated Wireless (A/asia.) Ltd. were completed early in 1927 and a direct beam radio telegraph service to England was established on 8th April, 1927. A similar service to North America was opened on 16th June, 1928, and other radio telegraph services have since been established for communication with Barbados, Ceylon, China, India and the United States of America. Satisfactory communication is maintained daily over a period of hours, and the services are well patronized by the public. On the 1st October, 1946, as a result of the Overseas Telecommunication Act, all external radio services operated by Amalgamated Wireless (A/asia.) Ltd. were transferred to the Overseas Telecommunication Commission (Australia). A brief outline of the operations of the Overseas Telecommunication Commission will be found in § 6, paragraph 4 (iv) of Official Year Book No. 37.

(ii) *Radio Telegraph Communication in the Pacific.*—Radio telegraph services are in existence between Sydney and Manila (Philippine Islands), Noumea (New Caledonia), Port Moresby (Papua), Suva (Fiji) and China.

(iii) *Radiotelegraphic Traffic.* (a) *International.* Particulars of the international radio telegraphic traffic are not now available separately, but are included in the particulars of the total oversea traffic by cable and radio to and from Australia (*see* p. 220.)

(b) *Coast Stations.* Particulars of the traffic handled by the several coast stations during 1947-48 are as follows:—

RADIO TRAFFIC : COAST STATIONS, 1947-48.

State or Territory.	Total Paying Words.	Particulars.			
		Messages.			
		Paying.	Service.	Weather.	Total.
New South Wales	2,317,097	111,118	11,752	5,743	128,613
Victoria	112,720	8,762	961	1,368	11,091
Queensland	217,571	12,906	5,915	7,925	26,746
South Australia	95,128	6,972	580	2,506	10,058
Western Australia	285,299	19,829	2,991	8,542	31,362
Tasmania	23,251	1,620	347	468	2,435
Northern Territory	102,568	4,898	1,022	22,516	28,436
Australia	3,153,634	166,105	23,568	49,068	238,741
Willis Island, Papua and New Guinea	2,014,026	86,161	6,749	2,513	95,423
Grand Total	5,167,660	252,266	30,317	51,581	334,164

During 1946-47 the traffic at Australian coastal stations amounted to 248,576 messages with 3,922,899 paying words.

(iv) *Overseas Telecommunications Commission.* An outline of the constitution, purpose and functions generally of the Overseas Telecommunications Commission (Australia) will be found in § 6, paragraph 4 (iv) of Official Year Book No. 37.

CHAPTER VI.

EDUCATION.

§ 1. General.

1. **Evolution of Educational Systems of the States.**—As the first settlement in Australia was in New South Wales, it was but natural that Australian education should have had its beginning in that State, and consequently the mother State has played a leading part in the evolution of educational method and system in Australia. Detailed particulars may be obtained from the various reports of the State Education Departments. The subject is dealt with in some detail in the first two issues of the Official Year Book, which also contain a more or less detailed account of the origin and earlier development of the educational systems of the other States.

2. **Later Development in State Educational Systems.**—Issues of the Official Year Book up to No. 22 contain an outline of later developments of the educational systems of the various States. The educational systems of the States may now be considered as more or less homogeneous entities, the various stages succeeding one another by logical gradation from kindergarten to university.

3. **School Age.**—The statutory school age for children in each State, set out briefly, is as follows:—New South Wales, 6 to 15 years; Victoria, 6 to 14 years; Queensland, 6 to 14 years; South Australia, 6 to 14 years; Western Australia, 6 to 14 years; and Tasmania, 6 to 16 years. Legislation was passed in 1943 in Victoria and Western Australia increasing the school leaving age to 15 years, and in 1946 in South Australia enabling the Governor-in-Council to raise the leaving age by proclamation to an age not exceeding 15 years, but none of these provisions had been proclaimed at the end of December, 1949.

It is provided in some States that where a child is living outside stated distances from a State school, the age at which the child must commence school is increased. Provision is also made that a scholar having attained a certain standard of education may leave school before reaching the statutory leaving age.

At the 1936 Conference of Directors of Education a resolution was passed urging the necessity of raising the compulsory school leaving age to 15 years. This resolution was submitted to a conference in Sydney of Ministers of Education who agreed to recommend to their respective Governments legislation to implement the proposal by the year 1940, but owing to war conditions its operation was postponed.

4. **Australian Council for Educational Research.**—This Council was constituted on 10th February, 1930, as the result of an endowment from the Carnegie Corporation of New York. The endowment terminated in December, 1942, by which time the total value in Australian currency of the annual payments had amounted to £120,000. The Council now receives grants from the Commonwealth Government and the six State Governments which in 1948 amounted to £7,500 a year.

The Council consists of nine members of whom six are elected by State Institutes for Educational Research established in each of the Australian States. Operations are conducted through a Director assisted by a professional and clerical staff of about twenty persons. The functions of the Council are to conduct surveys and inquiries

in the educational field, to make grants to approved investigators, to act as a centre of information on educational developments both within Australia and overseas, to provide services of a technical character such as those connected with the assessment of knowledge and aptitude, and to provide training for research workers. In general, through the publication of reports and in other ways, the Council aims at improving the standards of education and at stimulating thought about educational problems. So far about 100 reports have been published, two of the latest being respectively "A Study of Accrediting in Australian Schools", and "Training through Latin". The Council also issues a series of information bulletins.

The Council is autonomous, but maintains close contact with State educational authorities, with the Commonwealth Office of Education, with the Universities and with other educational bodies. Its present investigations include a comparative survey of the courses of study and examinations for children between ten and thirteen years, made at the request of the State Education Departments, and a study of the prediction of success of University students.

During the 1939-45 War the Council was called upon for advice and service by a number of Commonwealth departments. The Council acts as the chief centre in Australia for the preparation and distribution of standardized tests of general intelligence, special aptitude, and educational attainment. It has set up a Test Division to deal with this aspect of the work.

The head-quarters of the Council are at 147 Collins-street, Melbourne, C.1, Victoria.

§ 2. Census Records.

1. **Persons Receiving Instruction.**—The Census and Statistics Act 1905-1938 specified "Education" as a subject for inquiry at a Census, but did not indicate the nature or range of the information to be furnished. The Census and Statistics Act 1946, however, provided for the omission of this subject. At earlier Censuses an inquiry regarding the degree of education was restricted to a question as to ability to read and write, but under the system of compulsory education the number of persons in Australia who reach maturity without being able to read and write is very small, and this question was omitted at the 1933 Census. The only question asked concerned those receiving instruction at the time of the 1933 Census and related to the nature of the school they were attending. Details for the Censuses of 1911, 1921 and 1933 were as follows:—

PERSONS RECEIVING INSTRUCTION AT THE DATE OF THE CENSUS, AUSTRALIA. 1911 TO 1933.

Receiving Instruction at—	Number.			Percentage.		
	1911.	1921.	1933.	1911.	1921.	1933.
				%	%	%
Government School ..	593,059	791,724	904,383	76.49	77.36	77.23
Private School ..	156,106	193,774	224,994	20.13	18.93	19.21
University ..	2,465	7,252	8,525	0.32	0.71	0.73
Home ..	23,760	30,712	33,126	3.06	3.00	2.83
Total ..	775,390	1,023,462	1,171,028	100.00	100.00	100.00

2. **Ages of Scholars.**—Details concerning the number of scholars at specified ages in 1933 together with the total number of persons recorded for those ages may be found on page 227 of Official Year Book, No. 37.

3. **Percentage of Persons not Receiving Instruction.**—At the Census of 1933 the compulsory school age in the various States ranged from 6 to 14 years. The proportion of children aged last birthday from 6 to 13 years receiving instruction was 94.1 per cent. Conversely 5.9 per cent. of the children within the compulsory range were not indicated as receiving instruction at the date of the Census. The corresponding ratio in 1921 was 6.7 per cent.

As the minimum compulsory school age in New South Wales and Tasmania at the date of the 1933 Census was 7 years, and as exemptions from further attendance for special reasons on attaining age 13 obtain throughout the States, a more reliable estimate of the percentage of children not receiving instruction may be obtained by ignoring the extreme ages of the compulsory range. The elimination of these ages reduces the percentage from 5.9 to 4.3 per cent. Attendance at school was known to be affected by the severe economic conditions prevailing at the time of the Census, and this latter figure was consequently in excess of the corresponding percentage of 3.7 in 1921. The effect of accessibility to schools may be seen in the further reduction of the percentages of these ages not receiving instruction in the metropolitan areas to 3.5 in 1933 and to 2.9 in 1921.

4. **Religions of Scholars.**—Information showing the class of school at which the young adherents to the principal religious denominations were being educated at the 1933 Census may be found on page 228 of Official Year Book No. 37.

The most prominent feature is the relatively small proportion of Roman Catholics attending State schools. Of the Roman Catholics reported as receiving instruction, 34.66 per cent. were attending State schools compared with 86.84 per cent. for the rest of the community, the proportion for the whole being 77.23 per cent.

§ 3. State Schools.

1. **General.**—The State schools, or, as they are sometimes termed, the "public" schools, of Australia comprise all schools directly under State control, in contradistinction to the so-called "private" schools, the bulk of which, though privately managed, nevertheless cater for all classes of the community. Separate information regarding technical education is given in § 6, but the junior technical schools are included hereunder. The returns include figures relating to correspondence schools as well as subsidized schools, but evening schools and continuation classes, where such are in existence, are not included, but are dealt with separately in par. 3 (v) following.

2. **Returns for Year 1947.**—(i) *General.* The following table shows for 1947 the number of State Schools, together with the teachers employed, teachers in training and the number of individual children in attendance :—

STATE SCHOOLS, 1947.

State or Territory.			Schools at end of year.	Teachers Employed (excluding Teachers in Training).	Teachers in Training.	Net Enrolment.
New South Wales(a)	..	..	2,657	11,943	2,056	375,011
Victoria ..	..	..	2,345	8,510	608	213,687
Queensland ..	..	..	1,545	5,531	800	143,634
South Australia ..	..	..	754	3,034	452	76,349
Western Australia ..	..	..	561	2,268	358	(b) 60,382
Tasmania ..	..	..	324	1,510	174	35,952
Northern Territory(c)	..	..	5	24	..	724
<hr/>						
Australia—1947	..	..	8,191	32,820	4,538	905,739
1946	..	..	8,271	32,753	3,559	886,811

(a) Includes Australian Capital Territory.
30th June, 1948.

(b) Average weekly enrolment.

(c) Year ended

(ii) *Average Enrolment and Attendance.* The methods of calculating enrolment are not identical throughout the States. The unit in South Australia is the daily enrolment while New South Wales, Victoria, Western Australia and Tasmania employ the weekly enrolment. In Queensland no average enrolment is compiled, and the mean of the four quarterly gross enrolments is the only figure available.

As with enrolments there is not complete uniformity in arriving at the average attendance, but most of the States aggregate the attendances for the year and divide by the number of school sessions. New South Wales and Western Australia, however, employ averages of term averages. The matter of securing uniformity in these respects has been under consideration for some time, and the Australian Council for Educational Research, already referred to in § 1, par. 4, is devoting attention to the question of securing greater uniformity in methods of collection and presentation of educational data generally. This matter was discussed at a meeting of Directors of Education at a conference held in Sydney in July, 1947. The average enrolment and attendance in each State during 1947 are shown below :—

STATE SCHOOLS : AVERAGE ENROLMENT AND ATTENDANCE, 1947.

State or Territory.				Average Weekly Enrolment.	Average Daily Attendance.	Percentage of Attendance on Enrolment.
New South Wales	..	..	..	340,867	299,970	88.00
Victoria	..	..	..	204,013	184,302	90.34
Queensland	..	..	..	133,564	116,879	87.51
South Australia	..	..	..	72,490	66,548	91.80
Western Australia	..	..	..	60,382	55,966	92.69
Tasmania	..	..	..	34,065	30,483	89.48
Northern Territory ^(a)	..	..	..	724	651	89.92
Australia—1947				846,105	754,799	89.21
194 ⁽¹⁾				834,341	731,058	87.62

(a) Year ended 30th June, 1948.

The percentage of attendance on enrolment is lowest in Queensland, but this figure is not comparable with those of the other States, as no average enrolment is available for Queensland.

Extraordinary epidemics apart, it would appear from the steadiness of the returns in recent years that the percentage of attendance on enrolment is approaching its maximum under present conditions in Australia. Recurring epidemics of contagious diseases, minor illnesses, bad weather and long distances are all serious factors limiting the full attendance of pupils at school.

The average attendance at the State Schools in Australia is shown below for the year 1891 and at varying intervals to 1947 :—

STATE SCHOOLS : AVERAGE ATTENDANCE, AUSTRALIA.

Year.		Total Population. (a)	Average Attendance.	Year.		Total Population. (a)	Average Attendance.
1891	..	3,421	350,773	1941	..	7,144	732,116
1901	..	3,825	450,246	1943	..	7,270	706,650
1911	..	4,574	463,799	1944	..	7,347	722,942
1921	..	5,511	666,498	1945	..	7,430	726,440
1931	..	6,553	817,262	1946	..	7,518	731,058
1933	..	6,657	805,334	1947	..	7,639	754,799
1939	..	7,005	744,095				

(a) At 31st December, in thousands

It is possible, for some Census years, to relate with reasonable accuracy the average attendance of scholars at State Schools to the number of children who are approximately of school age. For this purpose the ages 5 to 15 years, both included, have been taken and the average attendance per thousand children was :—1891, 455 ; 1901, 464 ; 1911, 477 ; 1921, 544 ; and 1933, 585. Although other factors might have affected the results in a minor degree it would appear that considerable improvement has taken place in school attendance.

(iii) *Schools in the Northern Territory.* During 1947-48 five public schools were in operation, the number of pupils enrolled being 724, with an average daily attendance of 651. By arrangement between the Commonwealth and the South Australian Governments, the South Australian Education Department undertook the work of education in the Northern Territory from 1st January, 1945. The Commonwealth Government provides the schools and furniture, while the South Australian Education Department provides the teachers and determines the curricula for the various types of schools.

For further particulars of education facilities in the Northern Territory see Chapter X.—The Territories of Australia, Northern Territory § 10.

(iv) *Schools in the Australian Capital Territory.* During 1947 ten State Schools were in operation in the Australian Capital Territory ; individual pupils enrolled numbered 1,993 ; and average attendance was 1,767. By arrangement with the Commonwealth Government these schools are conducted by the New South Wales Education Department in the same way as the ordinary State Schools, the Department being recouped for expenditure. The cost of the teaching staff in 1947-48 was £48,000, while the cost of general maintenance items for the year amounted to £21,230. Ample provision has been made for both primary and secondary education, and this will be increased to meet requirements. The figures quoted exclude enrolment, etc., at the Trade School and the Evening Continuation School. A reference to the Canberra University College will be found in § 6, par. 9. For further particulars of education facilities in the Australian Capital Territory see Chapter X.—The Territories of Australia, Australian Capital Territory, par. 10.

3. Distribution of Educational Facilities.—(i) *In Sparsely-settled Districts.*

(a) *General.* The methods adopted in the various States to carry the benefits of education into the remotest and most sparsely-settled areas are set out in some detail in previous issues of the Official Year Book (see No. 22, pp. 430-1).

(b) *Correspondence Teaching.* Teaching by correspondence has been adopted to meet the needs of children out of reach of the ordinary means of education, including those prevented from attending school through physical ailment. Approximately 15,800 children received instruction in this way during 1947, the respective numbers in each State being : New South Wales, 5,795 ; Victoria, 1,485 ; Queensland, 5,266 ; South Australia, 1,138 ; Western Australia, 1,721 ; and Tasmania, 401.

(ii) *Centralization of Schools.* The question of centralization of schools adopted so successfully in America and Canada has received considerable attention in Australia. It is recognized that a single adequately staffed and well equipped central institution can give more efficient teaching than a number of small scattered schools in the hands of less highly trained teachers, and the small schools in some districts were therefore closed and the children conveyed to the central institution. The principle was first adopted in New South Wales in 1904, and in 1947 a sum of £97,328 was expended in boarding allowances and conveyance to central schools. Cost of conveyance to State Schools in Victoria during 1947-48 amounted to £310,334. In Queensland during 1947-48 the cost of transport by rail, road and boat, amounted to £46,648. In South Australia the sum of £101,000 was disbursed in travelling expenses of school children in 1947, while £137,372 was spent in Western Australia during 1947-48, £73,705 in Tasmania in 1947 and £10,444 in the Australian Capital Territory in 1947-48.

(iii) *Area Schools.* A new feature in education is the "Area School" established since 1936 in rural districts in Tasmania. These schools cater for certain groups of children brought from surrounding districts by buses and give instruction with a distinct rural inclination. In 1947 there were 16 area schools in operation having an average weekly enrolment of 4,232 scholars with a daily average attendance of 3,722. The net expenditure on these schools in 1947 was £114,136.

(iv) *Education of Backward and Defective Children.* This subject was referred to at some length in preceding issues of the Official Year Book (see No. 22, pp. 431-2).

(v) *Evening Schools.* Evening Continuation Schools have been in existence for many years in some of the States, but their progress has been uncertain. The aim of these schools is to provide a means of furthering the education of those who have left school at the termination of the primary course. Practical and cultural subjects are combined in the curriculum to be of assistance to those attending in their occupations and their civic life. In New South Wales the 25 Evening Youth Colleges with 200 teachers had an average weekly enrolment in 1947 of 3,825 and an average attendance of 2,468. The colleges are divided into three groups, junior technical, domestic science, and commercial. Attendances at the colleges for boys numbered 1,363, and at those for girls 1,105. The cost of maintaining these colleges in 1947 was £13,502.

(vi) *Higher State Schools.* In all the States higher schools have been established which provide advanced courses of instruction for pupils who have completed the primary grades. Reference to the development of these schools will be found in preceding Official Year Books (see No. 22, pp. 433-4).

(vii) *Agricultural Training in State Schools.* Extended reference to the methods adopted in the teaching of agriculture in State Schools was incorporated in preceding Official Year Books (see No. 22, pp. 434-7).

(viii) *Medical and Dental Inspection of School Children.* This subject is dealt with in detail in Chapter VIII. "Public Health and Related Institutions".

(ix) *Broadcasts to Schools.* It is estimated that about 60 per cent. of all schools in Australia are registered listeners to the Australian Broadcasting Commission's school broadcasts. School broadcasting is recognized by the educational authorities, public and private, as an integral part of Australian school education. Free radio licences were granted to all schools under the Broadcasting Act 1948. The broadcasts which are designed to supplement the work of the classroom teacher, are programmed throughout Australia on week-days at times decided upon after consultation with the State Education Departments. There are special broadcast sessions for the benefit of correspondence pupils in the outback areas throughout Australia.

School broadcasts cover a wide range of subjects, for all school grades, including English Literature, Music, Art, History, Geography, Social Studies, Current Affairs, Nature Study, Science, Health and Hygiene and French.

The broadcasts vary in length from 15 to 30 minutes, amounting to a total of about one hour on each school day, and extending through the greater part of the school year.

Audio-visual education, a method combining the radio and film as teaching aids, has been extensively developed in Victoria, where nearly half of the registered listening schools are also equipped with film-strip projectors. Radio-film broadcasts have also been used in experimental stages in Western Australia, South Australia and Tasmania.

The Kindergarten of the Air, primarily designed for the benefit of children unable to attend kindergarten schools, is broadcast on week-days throughout the year, and relayed over all regional and short wave stations; it is also broadcast from Port Moresby and over W.L.K.S., the station of the Army of Occupation in Japan. A weekly excerpt is broadcast by Radio Australia.

During UNESCO week school sessions are broadcast both on National relay and in State programmes.

In collaboration with the Commonwealth Office of Education, a series of two weekly broadcasts has been arranged to help foreign migrants with their English. The scripts for the series, which is called "English for New Australians", are written by experts appointed by the Commonwealth Office of Education, and produced by the Australian Broadcasting Commission. These sessions are broadcast throughout Australia.

4. **Training Colleges.**—The development of the training systems of the various States is referred to at some length in earlier issues of the Official Year Book (see No. 22, pp. 437-9).

5. **Expenditure.**—(i) *Maintenance — All Schools.* The net expenditure on maintenance in all grades of schools, excepting senior technical schools, and in Victoria and Tasmania junior technical schools, and the cost per head of average attendance for 1939 and the five years ended 1947 are shown in the following table. The figures do not include expenditure on buildings, which is given separately in a subsequent table. In all expenditure tables the figures for Victoria, Queensland and Western Australia relate to the financial year ended six months later than the calendar year.

STATE SCHOOLS: NET EXPENDITURE ON MAINTENANCE.

Year.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Terr.	Total.
TOTAL (INCLUDING SECONDARY SCHOOLS).								
(£.)								
1939	4,598,376	2,667,094	1,481,399	854,037	730,500	320,616	6,802	10,658,824
1943	4,970,296	2,945,099	1,510,568	922,307	804,404	421,684	4,643	11,579,001
1944	5,130,704	3,162,195	1,710,760	1,012,648	818,855	421,423	4,151	12,260,736
1945	5,386,412	3,265,201	2,056,409	1,100,469	917,323	492,106	5,185	13,223,105
1946	6,162,468	3,910,753	2,266,775	1,233,700	1,082,570	500,168	10,162	15,235,599
1947	7,542,623	4,533,365	2,465,221	1,533,470	1,435,885	703,181	15,164	18,228,909

PER HEAD OF AVERAGE ATTENDANCE.

(£ s. d.)

1939	15	12	2	14	1	4	13	0	9	12	18	4	14	5	7	11	7	6	11	3	9	14	6	7
1943	17	7	9	16	14	8	14	10	8	15	7	8	15	14	1	15	7	0	25	10	3	16	8	8
1944	17	10	8	17	14	0	15	17	6	15	18	8	15	14	9	15	0	0	20	19	4	16	19	2
1945	18	7	4	18	8	11	18	12	1	17	2	3	17	9	9	17	5	4	13	9	5	18	4	1
1946	21	3	0	21	16	1	20	2	9	19	3	0	20	5	4	19	6	6	18	12	3	20	16	10
1947	24	2	11	24	11	11	21	1	10	23	0	10	25	13	1	23	1	4	23	5	10	24	3	0

(a) Gross figures, receipts not being available.

(ii) *Maintenance—Secondary Schools.* The figures given in the preceding table refer to expenditure on maintenance of all State primary and secondary schools, excluding senior technical colleges. It has been thought desirable by the State Education Departments to give separate information in regard to the cost of secondary education. The difficulty of making any satisfactory allocation of the kind, however, will be understood when it is realized that both elementary and higher education are in some instances given in the same school and by the same teacher. Unfortunately, too, the term "secondary" has not the same meaning in all States. It might be mentioned here that similar difficulties arise in connexion with the apportionment amongst the various branches of expenditure on administration, inspection and the training of teachers. The figures quoted in regard to cost hereunder have been mainly extracted from the Reports of the State Education Departments, and are subject to those qualifications.

STATE SECONDARY SCHOOLS : EXPENDITURE ON MAINTENANCE.

State.	1946.		1947.	
	Cost.	Cost per Head of Population.	Cost.	Cost Per Head of Population.
	£	s. d.	£	s. d.
New South Wales	1,874,664	12 10	2,347,401	15 7
Victoria	1,123,478	11 0	1,184,629	11 5
Queensland	247,716	4 6	269,662	4 10
South Australia	276,879	8 9	295,775	9 2
Western Australia	243,646	9 10	356,903	14 0
Tasmania	88,964	7 1	92,897	7 2

The figures in all cases exclude the cost of buildings. In Queensland, the figure quoted excludes the cost of the Agricultural High School and College, which amounted in 1946 to £55,993 and in 1947-48 to £73,839. For Western Australia the total for 1946-47 includes £68,760 and for 1947-48, £67,348 on account of "post primary" education.

(iii) *Buildings.* Expenditure on State School buildings, excluding Technical Colleges, for the years 1939 and 1943 to 1947 was as follows :—

STATE SCHOOLS : EXPENDITURE ON BUILDINGS.

(Including Loan Fund Expenditure.)

(£)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Terr.	Total.
1939	411,720	206,481	174,725	85,539	56,994	60,011	539	996,009
1943	362,596	114,261	47,614	67,748	40,354	39,951	944	673,468
1944	409,483	176,892	101,780	103,863	78,492	61,828	2,444	934,782
1945	425,397	256,048	114,069	165,642	99,489	70,288	2,303	1,133,236
1946	569,660	376,557	149,354	152,205	137,835	116,215	2,318	1,504,144
1947	747,294	540,936	275,153	231,967	203,926	77,436	2,261	2,078,073

The totals for the various States in 1947 include the following amounts expended from loan and other funds; figures for 1946 are shown in brackets—New South Wales, £316,644 (£187,752); Victoria, £406,286 (£282,859); Queensland, £183,772 (£105,836); South Australia, £137,222 (£77,891); Western Australia, £181,622 (£108,616); and Tasmania, £65,957 (£83,927).

(iv) *Total.* The net total cost of education in State Schools including buildings, during the years 1939 and 1943 to 1947 was as follows:—

STATE SCHOOLS : NET TOTAL COST.

(£)

Year.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Terr.	Total. (b)
1939	5,010,096	2,873,575	1,656,124	939,576	787,494	380,627	7,341	11,654,833
1943	5,332,892	3,059,360	1,558,182	990,055	844,758	461,635	5,587	12,252,469
1944	5,540,187	3,339,087	1,812,540	1,116,511	897,347	483,251	6,595	13,195,518
1945	5,811,809	3,521,249	2,170,478	1,266,111	1,016,812	562,394	7,488	14,356,341
1946	6,732,128	4,296,310	2,416,132	1,385,905	1,220,405	676,383	12,480	16,739,743
1947	8,289,917	5,073,401	2,740,374	1,765,437	1,639,811	780,617	17,425	20,306,982

(a) Gross figures, receipts not being available.

(b) See footnote (a).

The figures in this and the preceding tables refer to all grades of State Schools (with the exception of senior technical schools and in Victoria and Tasmania junior technical schools). Including buildings, the net cost per scholar in average attendance for the whole of the State Schools in Australia amounted in 1946 to £22 17s. 11d., and £26 18s. 1d. in 1947, as compared with £4 9s. 3d. in 1901.

6. *School Banking.*—With the object of inculcating principles of thrift amongst the children, agencies of the Savings Banks have been established at most of the schools throughout Australia. Particulars of operative accounts for each State and Territory at 30th June, 1949, were as follows:—

SCHOOL SAVINGS BANKS AT 30th JUNE, 1949.

State or Territory.	School Agencies.	Operative Accounts.	Amount on Deposit.	Average per Depositor.
	No.	No.	£	£ s. d.
New South Wales	2,583	169,418	769,491	4 10 10
Victoria	2,708	158,680	724,044	4 11 4
Queensland	1,268	64,352	392,813	6 2 1
South Australia	324	79,442	419,883	5 5 8
Western Australia	505	49,143	286,415	5 16 7
Tasmania	424	34,503	166,001	4 16 1
Northern Territory	8	760	4,543	5 19 7
Australian Capital Territory	9	860	2,752	3 4 0
Australia—30th June, 1949	8,329	557,218	2,766,542	4 19 4
„ „ 1948	8,556	535,433	2,514,652	4 13 11
„ „ 1947	8,444	518,629	2,311,015	4 9 1

§ 4. Private Schools.*

1. Returns for 1947.—The following table shows the number of private schools together with the teachers engaged therein, and the enrolment and average attendance in 1947:—

PRIVATE SCHOOLS, 1947.

State or Territory.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales	725	5,585	113,296	99,844
Victoria	488	3,011	83,964	(a) 81,812
Queensland	250	1,815	39,623	36,465
South Australia	143	925	16,468	14,742
Western Australia	184	800	18,826	17,695
Tasmania	58	351	8,067	6,636
Northern Territory(b) ..	2	9	299	236
Total—1947	1,850	12,496	280,543	257,430
1946	1,827	12,157	276,561	252,726

(a) Net attendance.

(b) Year ended 30th June, 1948.

The Roman Catholic schools comprise the largest group of private schools in Australia. On the basis of the figures available, approximately 212,000 children, or 76 per cent. of the total in private schools, are educated in Roman Catholic schools.

The figures for Queensland include the returns from Grammar schools, of which there are eight—five for boys and three for girls, with an enrolment of 1,150 boys and 717 girls. These schools are governed by boards of trustees, partly nominated by the Government, and partly by the subscribers to the funds. The trustees make regulations regarding the fees of scholars, the salaries of teachers, and generally for the management of the schools. The Government endowment received in 1946 amounted to £13,200. In addition, a sum of £18,248 was received by way of fees for the tuition of State scholarship holders while £50,875 was paid to denominational schools. The Grammar schools are inspected annually by officers of the Department of Public Instruction.

2. Growth of Private Schools.—The enrolment and average attendance at private schools in 1891 and at varying intervals to 1947 were as follows:—

PRIVATE SCHOOLS: ENROLMENT AND ATTENDANCE.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891	124,185	99,588	1943	264,433	233,538
1901	148,959	120,742	1944	274,793	245,006
1911	160,794	132,588	1945	272,814	249,024
1921	198,688	164,073	1946	276,561	252,726
1931	221,387	189,665	1947	280,543	257,430
1939	247,482	210,171			

3. Registration of Private Schools.—Conditions in regard to the registration of private schools were referred to in previous Official Year Books (see No. 18, p. 451).

§ 5. Free Kindergartens.

The following information regarding Free Kindergartens has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia where the details were furnished by the Education Department. It refers to kindergarten unions or associations, and excludes the kindergarten branches in the Government schools of the various States.

* Private schools include all schools not wholly under State control. The term "private," though popularly applied, is, of course, a misnomer.

FREE KINDERGARTENS, 1948.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales ..	33	1,385	87	35	..
Victoria	43	1,666	74	37	77
Queensland	5	244	10	..	..
South Australia(a) ..	47	1,632	131	..	10
Western Australia ..	23	483	29	19	30
Tasmania	11	377	28	..	1
Total—1948 ..	162	5,787	359	91	118
1947 ..	156	5,279	364	131	107

(a) Includes affiliated suburban and country centres.

Only 20 of these 162 kindergartens in 1948 were located outside metropolitan areas; these were as follows:—New South Wales—three at Newcastle, one at Parramatta; Victoria—two at Geelong, one each at Bairnsdale, Ballarat, Castlemaine, Euroa, Horsham, Maryborough and Mildura; South Australia—one at Nuriootpa; Western Australia—one each at Kojunup and Northam; Tasmania—two at Launceston and one each at Devonport and St. Marys. In each capital city, excepting Hobart, there is a training college and the number of students in training during 1948 was 130 in Sydney, 140 in Melbourne, 39 in Brisbane, 41 in Adelaide, and 44 in Perth.

§ 6. Universities.

1. *Origin and Development.*—A brief account of the origin and development of the Universities in the various States is given in preceding issues of the Official Year Book (see No. 22, pp. 442–3). Details of the Australian National University for the year 1948 are shown in paragraph 8.

2. *Teaching and Research Staff.*—The following table shows the number of professors, readers, associate and assistant professors, lecturers in charge, lecturers, demonstrators, tutors, honorary lecturers and demonstrators, on the teaching and research staffs of the Universities during the years 1946 to 1948:—

UNIVERSITIES: TEACHING AND RESEARCH STAFF, 1948.

University.	Professors.	Readers, Associate Professors, Assistant Professors, Lecturers in Charge.	Lecturers. (a)	Demon- strators and Tutors.	Honorary Lecturers and Demon- strators.	Total.
Sydney	49	16	549	52	68	734
Melbourne	35	28	322	240	3	628
Queensland (Brisbane) ..	20	18	187	92	(b) 10	327
Adelaide	25	18	132	83	2	260
Western Australia (Perth) ..	15	6	90	20	(b) 4	135
Tasmania (Hobart) ..	15	3	46	11	..	75
New England University College .. ..	..	8	24	9	16	57
Canberra University College	..	..	26	4	1	31
Total 1948 ..	159	97	1,376	511	104	2,247
1947 ..	155	95	1,249	418	130	2,047
1946 ..	148	53	1,132	372	132	1,837

(a) Includes Senior Lecturers and Assistant Lecturers.

(b) Department of External Studies.

The Conservatorium of Music in Sydney is attached to the Education Department, but in Melbourne and in Adelaide the Conservatorium of Music is under the control of the University.

3. Students.—(i) *Total.* The number of students, including Commonwealth Reconstruction Training Scheme students, enrolled for courses at the Universities during the years 1946 to 1948 is shown in the following table:—

UNIVERSITIES : TOTAL STUDENTS ENROLLED, 1948.

University.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total (a)
		Post-Graduate.	Sub-Graduate.			
Sydney	9,403	207	625	..	275	10,404
Melbourne (b) ..	7,680	3	723	144	986	9,536
Queensland (Brisbane) ..	3,206	31	445	43 ²	238	4,343
Adelaide	2,716	82	1,099	..	991	4,888
Western Australia (Perth) ..	1,917	32	..	..	33	1,978
Tasmania (Hobart) ..	547	8	17	44	118	734
New England University College	221	22	4	..	9	256
Canberra University College	167	..	69	..	83	314
Total 1948	25,857	385	2,982	620	2,733	32,453
1947	23,548	371	2,764	373	3,551	30,477
1946	19,969	421	2,348	284	2,655	25,585

(a) Adjustment made for students enrolled for more than one course. enrolled but attending Canberra University College.

(b) Includes 18 students

Of the total students in 1948, 25,540 were males and 6,913 females. Included in those enrolled for degrees were 175 enrolled for higher degree courses in Melbourne, 12 in Queensland, 78 in Adelaide, 38 in Western Australia, and 2 at the New England University College.

(ii) *Commonwealth Reconstruction Training Scheme Students.* The number of Commonwealth Reconstruction Training Scheme students enrolled for courses at the Universities during 1946 to 1948 is shown in the following table:—

UNIVERSITIES : COMMONWEALTH RECONSTRUCTION TRAINING SCHEME STUDENTS ENROLLED, 1948.

University.	Degree Courses.	Diploma Courses.		Certificate Courses.	Miscellaneous Subjects.	Total (a)
		Post-Graduate.	Sub-Graduate.			
Sydney	3,863	44	184	..	42	4,107
Melbourne (b) ..	3,271	..	395	74	315	4,055
Queensland (Brisbane) ..	1,188	8	212	262	68	1,733
Adelaide	873	9	431	..	145	1,458
Western Australia (Perth) ..	651	14	..	..	10	671
Tasmania (Hobart) ..	196	2	12	1	20	231
New England University College	42	3	..	..	..	45
Canberra University College	98	..	53	..	14	164
Total 1948	10,182	80	1,287	337	614	12,464
1947	9,677	166	1,338	208	1,020	12,401
1946	6,789	100	949	118	568	8,519

(a) Adjustment made for students enrolled for more than one course. enrolled but attending Canberra University College.

(b) Includes 12 students

Of the total Commonwealth Reconstruction Training Scheme students in 1948, 12,011 were males and 453 females. Included in those enrolled for degrees were 35 enrolled for higher degrees in Melbourne, 7 in Queensland, 11 in Adelaide and 16 in Western Australia.

(iii) *External Service Personnel.* In addition to the students shown in the previous tables there were External Service Forces Personnel enrolled at the various universities, the total numbers for years 1944 to 1946 being as follows:—1944, males 2,068, females 120; 1945, males 2,661, females 79; and 1946, males 1,652, females 27.

4. **University Receipts.**—The receipts of the Universities are derived principally from Government grants, students' fees, and income from private foundations, etc. From all sources other than new bequests the receipts during 1948 for general University functions were as shown in the table below. In South Australia Government grants and income from private foundations include amounts in respect of the Waite Agricultural Research Institute. The receipts and expenditure for extra-university activities are shown in par. 7 following.

UNIVERSITIES : RECEIPTS, GENERAL ACTIVITIES, 1948.
(£)

University.	Government Grants.	Students' Fees.	Interest, Rent, Dividends and Donations.	Other.	Total.
Sydney	227,998	379,489	58,051	17,184	682,722
Melbourne	410,319	200,304	25,567	36,606	672,796
Queensland (Brisbane)	154,191	82,157	18,965	19,886	275,199
Adelaide	129,448	74,980	40,313	15,473	260,214
Western Australia (Perth)	131,849	9,896	761	16,074	158,580
Tasmania (Hobart)	82,686	10,586	343	2,914	96,529
New England University College	47,113	5,283	447	15,931	68,774
Canberra University College	18,900	3,289	94	213	22,496
Total 1948	1,202,504	765,984	144,541	124,281	2,237,310
1947	893,614	639,853	130,918	106,011	1,770,396
1946	761,240	520,816	135,649	87,163	1,504,868

The figures in the foregoing table do not include the value of new foundations received by the Universities which, in 1948, were as follows:—Sydney, £9,580; Melbourne, £116,269; Queensland, £42,906; Adelaide, £199,739; Tasmania, £4,312 and the New England University College, £11,665.

5. **Principal University Benefactions.**—In preceding issues of the Official Year Book information is given in some detail in regard to the extent to which the Universities have benefited from private munificence. Space will permit of reference herein to the more important benefactions only.

The endowments to the Sydney University include the Challis Fund, £410,052; the G. H. Bosch Fund, £268,929; the P. N. Russell Fund, £101,457; the Oswald Watt Fund, £115,744; and the Fisher Estate, £43,245. In addition, the University receives a large annual revenue from the trustees of the McCaughey bequest. Excluding the principal of the latter, the credit balances of the private foundations amounted to £1,702,983 at 31st December, 1948.

Mr. Dafydd Edward Lewis in 1941 bequeathed approximately £700,000 to trustees to provide scholarships at the Melbourne University for boys from State elementary and secondary schools. This bequest is the largest made in Australia for educational purposes. Mr. Sidney Myer's gifts for various special and general purposes amounted to £60,000, while Sir Samuel Gillott, Mr. Edward Wilson (Argus Trust), and Sir Samuel Wilson contributed £41,000, £34,000, and £30,000 respectively. The estate of the late Miss Helen Mackie provided £50,000 for the endowment of pre-clinical chairs, while Mr. R. B. Ritchie's gifts for the endowment of a Chair of Economics amounted to £30,000, and two sums of £30,000 and £25,000 were received from the Supreme Court Library Fund for the endowment of a Chair of Public Law and for the development of law teaching respectively. Dr. James Stewart founded scholarships in Anatomy, Medicine and Surgery to the capital value of £26,000. The Hon. Francis Ormond contributed £20,000 to the University as an endowment for the Chair of Music and for scholarships in music, as well as benefactions to Ormond College amounting to considerably over £100,000, and the late Dr. F. Haley left £50,000 for medical research. Bequests of approximately £20,000 each for general purposes were made by Mr. John Hastie and Mr. C. D. Lloyd, while similar sums were bequeathed by the late Sir John Higgins for research scholarships in industrial chemistry and bio-chemistry as related to the pastoral and agricultural industries and by Mr. R. J. Fletcher for medical research. The late Mr. E. Truby Williams gave £54,000 for the Conservatorium of Music, the library and general purposes. Mr. Russell Grimwade has given £50,000 for a new school of biochemistry, and the trustees of the W. L. Baillieu Trust have given £43,330 of a gift of about £100,000 with which a new library will be built. The Melbourne *Herald* gave £30,000 to establish the first Chair of Fine Arts in Australia. From the estate of the late Mr. W. P. Greene, £25,000 has been received for cancer research and from the Baillieu family £30,000 for the erection of a Metallurgy Research School. A bequest of £22,500 has been received from the estate of the late Dr. Georgina Sweet to provide three fellowships in Economic Zoology, Medicine and Economic Geology. Of £30,000 promised by an anonymous benefactor to provide for a Vice-Director of the Conservatorium of Music, £12,000 has been received.

Queensland University, to 30th April, 1949, had received £261,099 from the McCaughey estate and £41,073 from the Walter and Eliza Hall Trust, while the Hon. T. C. Beirne gave £20,000 in 1935 for the endowment of a Chair of Law in Queensland. The permanent site for the University and other land valued at £62,000 were presented by Dr. and Miss Mayne. In 1937 the trustees of Mr. W. Robertson bequeathed £10,400 for the Chair of Agriculture.

The chief benefactors to the Adelaide University have been Sir George Murray, and his sister Miss M. T. Murray, £134,000; Mr. Peter Waite and his daughter Elizabeth Macmeikan, £120,000; Sir Thomas Elder, £100,000; Sir Langdon Bonython, £72,000; Mr. T. E. Barr Smith, £44,000; Dr. F. Lucas Benham, £44,000; Mrs. R. F. Mortlock and her son Mr. J. T. Mortlock, £30,000; Mrs. Jane Marks, £30,000; Broken Hill Prop. Co. Ltd., £30,000; Mr. Edward Neale, £28,000; family of Mr. John Darling, £25,000; Sir William Mitchell, £25,000; Mrs. A. M. Simpson and Miss A. F. Keith Sheridan, £20,000; Sir Walter Hughes, £20,000; and Mr. R. Barr Smith and family, £20,000.

Under the will of Sir Winthrop Hackett the University of Western Australia received £425,000 for the erection and maintenance of University buildings and for studentships, scholarships, bursaries and other financial help for deserving students. In addition, an endowment of £18,000 was made in 1913 for the Hackett Chair of Agriculture. The late Robert Gladden bequeathed an estate valued at £60,000, particularly to provide travelling scholarships, and numbers of bequests, aggregating about £55,000, have been made to the University mainly for the establishment of a medical school or research in connexion therewith.

6. **University Expenditure.**—The principal item of disbursements under the general University activities consists of the salaries of teaching and research staff representing 68.5 per cent. of the total compared with 68.9 per cent. in 1947 and 69.4 per cent. in 1946. The following table shows the expenditure, excluding capital expenditure on buildings, during the years 1946 to 1948:—

UNIVERSITIES : EXPENDITURE, GENERAL ACTIVITIES, 1948.

(£)

University.	Adminis- tration.	Maintenance of—			Other.	Total.
		Teachers' Depart- ment.	Premises.	Libraries.		
Sydney	68,000	542,687	63,335	17,069	36,458	727,549
Melbourne	60,703	424,501	96,119	17,438	77,176	675,937
Queensland (Brisbane) ..	26,660	223,115	24,597	7,886	26,534	308,792
Adelaide	12,846	187,678	24,574	8,617	29,038	262,753
Western Australia (Perth)	15,564	102,666	21,644	5,530	10,752	150,525
Tasmania (Hobart) ..	9,802	61,458	6,369	6,587	10,986	95,202
New England University College	9,490	30,101	7,744	2,405	19,212	68,952
Canberra University College	4,196	9,726	419	1,193	200	15,734
Total 1948	207,291	1,582,262	244,801	66,734	210,356	2,311,444
1947	169,283	1,317,133	186,526	55,869	182,308	1,911,119
1946	124,564	1,025,322	122,791	47,357	157,465	1,477,499

7. **Extra-University Activities.**—(i) *General.* The tables shown in paragraphs 4 and 6 relate to the general University activities while those following show the financial position of all extra-university activities. The heterogeneous character of the items in the statements for these activities varies to such extent between the Universities that comparisons of the totals are misleading, but they include all items excluded from the general statement and give useful information within limits.

(ii) *Receipts, Extra-University Activities.* The following table shows the main receipts for the years 1946 to 1948:—

UNIVERSITIES : RECEIPTS, EXTRA ACTIVITIES, 1948.

(£)

University.	Govern- ment Grants.	Interest, Rent, and Dividends.	Candidates' Fees, Public Examina- tions.	Special Research Grants.	Other.	Total.
Sydney	16,400	86,645	7,574	55,707	2,211	168,537
Melbourne	3,000	42,151	52,935	51,818	(a) 79,393	229,207
Queensland (Brisbane)	3,200	9,314	10,605	10,615	3,101	52,235
Adelaide	5,250	9,906	9,953	18,074	3,247	46,430
Western Australia (Perth) .. ..	..	13,257	12,857	14,523	(b) 30,883	71,520
Tasmania (Hobart) ..	..	629	1,792	13,971	5,124	21,516
New England Uni- versity College ..	..	..	..	..	..	..
Canberra University College	3,300	122	..	..	..	3,422
Total 1948	31,150	159,124	105,016	173,708	123,869	592,867
1947	27,514	138,420	103,612	137,012	120,211	526,769
1946	35,230	147,687	103,175	105,497	106,867	498,456

(a) Includes receipts, Superannuation Fund £24,600, and University Press, £25,264.

(b) Includes University Press, £19,694.

(iii) *Expenditure, Extra-University Activities.* The following table shows the main items of expenditure for the years 1946 to 1948:—

UNIVERSITIES : EXPENDITURE, EXTRA ACTIVITIES, 1948.

(£)

University.	Salaries, Fees, etc.	Public Examina- tion Expenses.	Adult Education and Extension.	Special Research Expenses.	Other.	Total.
Sydney	28,165	..	10,578	67,775	17,968	124,486
Melbourne	36,083	35,840	1,633	70 159	a 104,756	248,471
Queensland (Brisbane)	..	21,111	3,813	16,006	9,629	50,559
Adelaide	5,553	8,269	2,496	19,531	11,854	47,793
Western Australia (Perth) .. ..	..	12,203	10,712	12,707	(b) 28,829	64,451
Tasmania (Hobart) ..	..	1,730	..	12,468	4,690	18,828
New England Uni- versity College ..	..	..	..	..	..	..
Canberra University College .. ..	..	..	..	..	(c) 3,151	3,151
Total 1948	69,801	79,153	29,232	198,586	180,877	557,649
1947	68,355	67,339	29,782	153,187	145,619	404,282
1946	55,051	61,685	33,830	116,841	156,294	423,701

(a) Includes University Press, £24,296; Superannuation Fund, £21,724. (b) Includes Scholarships £10,714, and the University Press, £17,925. (c) Includes Scholarships. £2,687.

8. *The Australian National University.*—By the Australian National University Act No. 22 of 1946 (assented to 1st August, 1946, proclaimed to commence on 7th February, 1947) as amended by Acts Nos. 21 and 56 of 1947, provision is made for the establishment and incorporation of a University in the Australian Capital Territory. The University is to be governed by a Council of not more than thirty members—of whom two are to be elected by each House of Parliament, not more than eight to be appointed by the Governor-General, not more than nine to be elected by Convocation, three to be elected by the teaching staff and three by the students, together with the Vice-Chancellor and co-opted members. Convocation, which is to consist of the graduates of the University and other persons admitted as members, has not yet been constituted. Until the Council is appointed in accordance with the Act there is an Interim Council appointed by the Governor-General, which is authorized to take such steps as are considered necessary in connexion with the establishment of the University and the commencement of its functions. The first chairman is Professor R. C. Mills, Director of the Commonwealth Office of Education and Chairman of the Universities Commission.

Provision is made for the appointment of a Vice-Chancellor, in the first instance by the Governor-General and thereafter by the Council. Sir Douglas Copland has been appointed as the first Vice-Chancellor. Mr. R. A. Hohnen is the Registrar.

The Interim Council in 1947 established an Academic Advisory Committee in England, consisting of Sir Howard Florey, F.R.S., Professor Raymond Firth, Professor W. K. Hancock and Professor Marcus L. Oliphant, F.R.S., to advise the Council in connexion with the establishment of the Research Schools. Professor Hancock subsequently found that he was unable to continue on this Committee and his place was taken by Professor K. C. Wheare.

The Act provides that after the expiration of the period of five years from 1st July, 1946 (during which time such funds not exceeding £325,000 per annum as may be required are to be provided by the Treasurer), the University is to receive an annual grant of £325,000. An annual appropriation for capital outlays is also made in the Parliamentary estimates.

The University is required by the Act to provide facilities for post-graduate research and may establish Research Schools including—(a) a School of Medical Research to be known as “the John Curtin School of Medical Research”; (b) a Research School of Physical Sciences; (c) a Research School of Social Sciences; and (d) a Research School of Pacific Studies. It may also provide facilities for University education generally, for the incorporation in the University of the Canberra University College, and for specialist training for officers of the Public Service. The Interim Council has decided to concentrate in the first instance on the establishment of the Research Schools and the training of research workers.

The Interim Council has in hand the preparatory work connected with the establishment of the Research Schools and has made a number of senior appointments to the academic staff: Professor Marcus L. Oliphant, B.Sc. (Adel.), Ph.D. (Cantab.), Hon. LL.D. (St. And.), Hon. D.Sc. (Melb.), M.Sc., F.R.S., Professor and Director of the Department of Physics of the University of Birmingham, has accepted its invitation to become the first Director of the School of Physical Sciences. In the John Curtin School of Medical Research, Professor A. H. Ennor has accepted the Chair of Biochemistry, Professor A. Albert the Chair of Medical Chemistry, and Professor F. J. Fenner the Chair of Microbiology. Professor G. Sawyer is the Professor of Law in the Research School of Social Sciences. In the Research School of Pacific Studies, Professor S. F. Nadel is Professor of Anthropology, Professor J. W. Davidson, Professor of Pacific History and Professor W. R. Crocker is the Professor of International Relations. Several other senior academic and technical officers have been appointed.

The Council has invited to Australia distinguished overseas scholars to confer with research workers and hold discussions on matters falling within their specialized field. Besides the members of the Academic Advisory Committee, who visited Australia in 1948, Professor R. W. Gerard of the University of Chicago, Professor T. Griffith Taylor of Toronto, Professor H. S. W. Massey, F.R.S., University College, London, Sir Geoffrey Taylor, F.R.S., and Sir Norman Haworth, F.R.S., of Birmingham have toured Australian Universities and research institutions under the aegis of the Australian National University.

Up to the present the Interim Council has also awarded 54 research scholarships to enable younger graduates to obtain further research training in the field of learning contemplated by the establishment of the Research Schools. In addition, eight Fellowships in the Social Sciences have been awarded.

Arrangements are made for the present with research institutions and Universities in Australia and elsewhere for the work of these scholars, and also for the work of members of the academic staff, to be carried on until the establishment of the various schools at Canberra. Two of the Schools (Physical Sciences and the John Curtin School of Medical Research) are in the preliminary stages of construction. Also on the 204 acres of ground set aside for the purposes of the University at Acton, Canberra, there is being constructed University House—a residential college for single members of the University. This building will provide individual quarters and in addition will act as the centre of activity for the social and broader intellectual development of the University community.

Details of staff and financial operations of the Australian National University for the year 1948 were:—

Staff—(i) Teaching and Research: The John Curtin School of Medical Research: one Professor of Biochemistry and two research fellows (one in Biochemistry and one in Experimental Pathology). The Research School of Physical Sciences: Two research fellows. (ii) Library, nine. (iii) Central Administration, sixteen. (iv) Maintenance, one. (v) Laboratories, three. Total, 34.

Research Scholarships—These numbered 26 and 24 of the holders were working abroad.

Library—Number of volumes, 5,948, and pamphlets, 182.

Receipts.—Commonwealth Government Grant, £75,000.

Expenditure—(i) Administration, £22,879. (ii) Teaching staff, £6,614. (iii) Library, £12,744. (iv) Maintenance of Premises, £1,965. (v) Special Grants £7,870; and other Expenses £11,191. Total, £63,263.

9. Canberra University College.—The main functions of the Canberra University College, created in 1930 by an Ordinance of the Australian Capital Territory, are, at present, to establish courses of lectures for degrees in co-operation with the University of Melbourne, and to conduct a School of Diplomatic Studies, chiefly, although not exclusively, for the training of diplomatic staff officers of the Department of External Affairs.

The University of Melbourne recognizes the instruction given at the College, examines students and grants degrees. The curriculum for degrees is that of the University of Melbourne and academic staff is appointed by the College with the approval of that University. The Canberra and Melbourne lecturers work very closely together and in some subjects the Canberra lecturers act as second examiners. The arrangement with the University of Melbourne is regarded as temporary only, and it is expected that the College will eventually be incorporated in the Australian National University, although incorporation is unlikely to take place until the Australian National University is firmly established as a post-graduate centre.

The Ordinance incorporates the Council of the College, which consists of nine members appointed by the Governor-General, and a member of the academic staff of the College co-opted by the Council.

The College is financed by an annual grant from the Commonwealth Government, which in the financial year 1949 amounted to £34,430, plus £4,112 fees received from students.

During 1949 there were 319 students enrolled at the College. The enrolments were distributed as follows:—(a) Melbourne University Courses—Arts 96, Economics and Commerce 178, Law 14, and Miscellaneous 3; and (b) College Courses—School of Diplomatic Studies—First year 10, Second year 11; Patent Law Courses 7.

In courses of the University of Melbourne, lectures in certain subjects are delivered during the day-time, as well as during the evening, commencing at 5 p.m. or later. All lectures in the School of Diplomatic Studies are held during the day-time.

For the present, the full-time academic staff consists of a principal who is also the Professor of Economic History, two professors and fourteen lecturers. There are also a number of part-time lecturers.

Although the College library contains only approximately 7,400 books, the resources of the Commonwealth National Library and the Government departmental libraries are available. Together, these are considerable, especially in the social sciences.

10. New England University College.—New England University College, comprising a Faculty of Arts and Economics and a Faculty of Science, is governed by the University of Sydney. It is situated at Armidale, on the Northern Tablelands of New South Wales. The College is almost entirely residential. The original university building stands in 183 acres of land and was presented to the University College by Mr. T. R. Forster in 1937. The Government of New South Wales bore the expense of converting it to its present use. Two large additional buildings providing lecture theatres and laboratories have already been erected and others are planned. Lectures began at the College on 14th March, 1938. Students wishing to proceed to degrees in the Sydney Faculties of Medicine, Veterinary Science, Agriculture and Economics may take the earlier courses at the College. In 1949 there were 39 lecturers, including four part-time, nine demonstrators and tutors of whom three were part-time, three research assistants and fourteen honorary lecturers. Two hundred and fourteen students were taking courses leading to degrees, 25 students were taking diploma courses; of these 30 were studying under the Commonwealth Reconstruction Training Scheme. Extension Board courses were also conducted during the year. Since the College was established nearly 600 acres have been added to the University property. This area includes a farm of 265 acres presented by Mr. P. A. Wright for the purpose of producing foodstuffs to be used by the College and for the practical applications of a course in Animal Husbandry which it is hoped to establish within two or three years.

11. **University Extension.**—(i) *New South Wales.* University extension lectures in individual subjects were instituted in Sydney in 1886, in order that persons unable to study for degrees and to attend the ordinary lectures might benefit by the work of university teachers. Extension lectures are now controlled by the Sydney University Extension Board, whose main aims are to disseminate and supplement University instruction.

The Board's chief aim is to advance the cause of adult education in New South Wales by bringing University teaching within the reach of men and women who are unable to attend the University. To this end it provides single lectures or courses of lectures, including post-graduate courses, at the University and at other metropolitan and country centres, including schools, and is prepared to consider applications for tutorial classes. The Board also arranges for distinguished lecturers from other States or countries to lecture in Sydney and elsewhere.

In the period 1st October, 1947 to 30th September, 1948, the total number of lectures arranged by the Extension Board in the city, suburbs and country towns was 858. There were 22 special courses arranged in Sydney and the suburbs, and language classes were conducted in Dutch, German, Russian, Spanish, and Scientific German.

(ii) *Victoria.* In 1947, the Victorian Government established the Council of Adult Education, and the University's part in adult education sensibly diminished. The grant to the University Extension Board, which had been £5,900, was reduced to £1,000, and the Board was replaced by the University Extension Committee.

Its chief functions are to arrange and conduct public lectures, designed mostly to be of interest to members of the graduate body; to conduct lectures for school pupils at matriculation level, both in Melbourne and at country centres; to arrange special courses for professional training institutions, such as physiotherapists, optometrists and speech and occupational therapists; to conduct evening lectures in modern languages; and to stimulate interest in Australian literature by conducting lectures and supporting, financially, the literary quarterly journal *Meanjin*, which is produced under the aegis of the University.

(iii) *Queensland.* The Adult Education service in Queensland continued to expand during the year 1947.

A new Regional Centre was opened at Cairns, increasing the number of these centres to five, in addition to the Chief Centre in Brisbane. Each Centre is in charge of a District Organizer who has the duty of arranging classes in the towns within his district, and in all, 29 towns were provided with Adult Education classes during the year.

The number of courses provided was 250, their duration varying from a few meetings to a year's work. In Brisbane an average of 1,500 students were continuously enrolled for a total of twenty classes per week, of which seventeen were held at the main centre and three in suburban schools. In the country the number of class meetings substantially exceeded the total held in Brisbane.

As in previous years, the State String Quartet gave public recitals in towns and townships throughout the State and a selection of paintings from the Queensland National Art Gallery was sent, under the charge of the Curator of the Gallery, on tour throughout the Southern and Western district from Ipswich to Cunnamulla.

A number of University and other highly qualified lecturers also visited country towns as widely separated as Dalby, Clermont, Cairns and Mt. Isa.

The Board's libraries continued to be well patronized by students, and practically the whole of the year's book purchases were allocated to the country.

All Adult Education Board's services were provided free of charge to the public, the total expenditure for the year being £14,330.

(iv) *South Australia.* Since 1917 the University of Adelaide, through the Joint Committee (with the Workers' Educational Association) for Tutorial Classes, has provided each year in the metropolitan area series of tutorial classes, lecture classes and study circles on a wide range of subjects of cultural and current interest for people who have

no intention of proceeding to a degree or diploma and are unable to attend the ordinary University courses. The fee is nominal, and the enrolment for these classes in 1948 was 805. The Joint Committee extends its activities on a limited scale into the larger country centres.

The University also arranges each year a number of free public lectures by distinguished visitors. Eight such lectures were given in 1948.

(v) *Western Australia.* In Western Australia the Extension Services of the University are handled by the Adult Education Board, the staff of which consists of a part-time Director and eight full-time officers.

The objective and the revised policy of the Board in recent years has been defined in the following terms :—" To provide men and women of varying educational attainments in country districts as well as in the metropolitan area with facilities for the constructive use of leisure by use of head or hands and in such a way as to stimulate in the individual a sense of citizenship and to encourage community activities among groups ".

Examples of the application of this policy in 1948 and preceding years include—

Everyman's Music Recitals.—Everyman's Music Recitals are given in the metropolitan area and in larger country towns. Teams of two to three artists now give these performances of carefully graded programmes of classical music with simple commentary based on earlier experimental work with troops in the Australian Army. Total attendances at the Board's musical activities in metropolitan and country districts averaged over 20,000 in the two years 1947 and 1948. A grant of £750 was made to the Board late in 1948 by the Government for the purpose of arranging symphony concerts in country districts. The Board is planning a series of such concerts to take place in 1949.

Country Drama and Ballet.—Two successful tours of the Linley Wilson Australian Caravan Ballet were arranged by the Board during 1948. Large attendances were recorded and numerous requests were received from other country districts for this type of performance.

Summer School.—A substantial broadening of the pre-war Summer School now brings to Perth for 13 days a cross-section of the Western Australian community both in terms of occupation and location. In January, 1948, 120 men and women were in residence in the former United States Bachelor Officer quarters now used as a hostel for ex-servicemen during University term. In addition, 204 non-resident students attended the full-time activities of the Summer School.

Metropolitan Lecture Classes.—Two series of Metropolitan Lecture Classes, each of ten meetings, are conducted each year. The average annual attendance at these classes totalled 800 in post-war years. With a few suburban exceptions, classes are held in the Adult Education Board rooms in Perth.

Box Discussion Group Scheme.—Some attempt has been made with the limited financial resources available to revive and revise the pre-war Box Discussion Group Scheme. The number of groups averaged 40 in the years 1944–1948.

(vi) *Tasmania.* In Tasmania the University Extension Board which had previously controlled the work of providing extra-mural tuition was replaced in 1919 by a Committee for Tutorial Classes. This Committee ceased activities in 1940 and classes are not at present organized through the University.

12. *Workers' Educational Associations.*—In 1913, Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people, and providing for the higher education of the workers in civic and cultural subjects.

In Victoria the Association has been superseded by the Council for Adult Education, a statutory body appointed by the Government. Statutory Boards have also been appointed in Queensland and Tasmania, but in both these States the Association still

carries on as a purely voluntary organization. Direct grants are made by the Governments of New South Wales and South Australia. The particulars of grants for classes and discussion groups organized by the Association and serviced by their respective State Universities in these two States in 1948 were as follows :—New South Wales, £20,400, 107 tutorial classes, 211 discussion groups; South Australia, £2,250, 23 tutorial classes and extension lectures at country centres.

Direct grants amounting to £6,570 were made to the Association in New South Wales for both organizing work and a teaching service. The teaching service in 1948 included 16 classes, 2 Summer schools (each of 10 days), 24 week-end schools, 12 short courses of public lectures, and 127 lectures to various organizations including W.E.A. clubs. In South Australia the Association receives a grant of £240 for general organizing purposes. In Tasmania the Association conducted 10 classes. The Carnegie Corporation has shown its interest in the work, by allotting at various times substantial grants to the Association and to the Universities. The Association's primary interest has been in subjects related to social change such as Industrial History, Economics, Political Science and Sociology. In recent years, however, there has been a substantial increase in the number of classes studying Psychology, History, Literature, Music, Drama and Popular Science. The Universities in New South Wales and South Australia co-operate with the W.E.A. in the formation of a joint committee for tutorial classes, which supervises the work with the assistance of a University officer with the title of Director of Tutorial Classes.

§ 7. The Commonwealth Office of Education.

1. **Establishment.**—Although, as has been explained elsewhere, education is primarily a concern of the State Governments, the activities of the Commonwealth Government in other directions inevitably brought it into the field of education at a number of points. It thus became necessary to create a permanent Commonwealth authority capable of providing the Government and others with reliable expert advice on the many educational problems that arise. To fulfil this need the Commonwealth Office of Education was established in 1945.

For administrative purposes the Office is attached to the Ministry of Post-war Reconstruction, and at present is accommodated in Sydney. Under the Minister, the control of the Office rests with the Director whose appointment is direct from the Governor-General in Council. By the Education Act, the Director is also *ex-officio* Chairman of the Universities Commission. The administrative staff of the Universities Commission is housed with the Office of Education and shares its facilities. The special work of the Universities Commission is dealt with in the next section of this chapter.

2. **Functions.**—By the Education Act 1945 the functions of the Office of Education are defined as follows :—“(a) to advise the Minister on matters relating to education; (b) to establish and maintain a liaison, on matters relating to education, with other countries and the States; (c) to arrange consultation between Commonwealth authorities concerned with matters relating to education; (d) to undertake research relating to education; (e) to provide statistics and information relating to education required by any Commonwealth authority; and (f) to advise the Minister concerning the grant of financial assistance to the States and to other authorities for educational purposes, and shall include such other functions in relation to education as are assigned to it by the Minister”.

3. **Activities.**—Thus the Commonwealth Office of Education advises the Commonwealth Government and its various Departments on educational matters relative to the States and overseas countries. It provides a very useful channel for negotiations between State Departments of Education and the Commonwealth Government; it organizes consultations between education authorities generally.

Information about recent important developments in education is collected continually from many sources within Australia as well as from countries overseas and is disseminated to State Education authorities and others in a number of ways, one of which is the distribution of a bi-monthly publication "Education News".

General research into educational problems is one of the important activities of the Office. In addition, close attention is being given to special fields of education such as school broadcasting, visual aids to education, youth education and the education of handicapped children. From time to time the results of survey and research work done in the Office or sponsored by the Office are published in monograph form.

The Office of Education is a Commonwealth authority with which overseas countries may deal on educational questions concerning Australia as a whole. Close contact in international education is maintained through a representative of the Office on the staff of Australia House in London. A very important post-war development in this international sphere is that of the United Nations Educational Scientific and Cultural Organization. The responsibility for implementing the constitution of UNESCO in Australia, and for advising the Government on such matters, rests with the Office of Education. To further the aims of UNESCO twelve National Co-operating Bodies have been set up together with a Co-ordinating Committee. The Office of Education acts as the secretariat of these bodies. Two schemes offering scholarships for bringing Asian students, technicians and administrators to Australia are administered by the Office of Education. These schemes were instituted to develop friendly relations with Australia's neighbours and to help reconstruction in these Asian countries. The Office is also supervising the expenditure of a sum of £30,000 voted by the Government for the provision of educational supplies in these Asian countries.

An educational programme for immigrants reaching Australia from displaced persons camps in Europe has been organized by the Office of Education. Instruction involving practice in using the English language and help in understanding Australian ways begins in the pre-embarkation centres in Europe and continues through to the continuation classes and correspondence courses provided for migrants already in employment in Australia.

A substantial part of the work of the Office is concerned with fostering the development in Australia of general educational and cultural activities. A series of publications for use as youth and adult education material has been commenced. A fortnightly "Current Affairs Bulletin" is provided at bulk rates to discussion groups and other bodies. Regular Discussion Posters and other pamphlets are also produced.

§ 8. The Universities Commission.

1. **General.**—The Universities Commission is a Commonwealth instrumentality which was set up at the beginning of 1943 under National Security (Universities Commission) Regulations primarily to achieve the following objects:—(a) To advise the Commonwealth Government on questions of man-power insofar as they relate to the training of university students; (b) to arrange for the training of adequate numbers of the graduates for all kinds of national service and to attract able students to the University for such training; and (c) to administer the scheme of financial assistance.

Thus the Commission was concerned with war-time problems. From the commencement of the 1939-45 War the Commonwealth Government had recognized the vital necessity of a continuing flow of properly trained graduates from certain of the faculties of the Universities, particularly from the six faculties of Medicine, Dentistry, Engineering, Science, Veterinary Science and Agriculture. The policy of the Government was to reserve students to commence and continue their studies in these faculties. In 1943 reservation was extended to cover the faculties of Arts, Economics, Law and Architecture.

With the passing of the Education Act 1945 the Universities Commission became associated with the Commonwealth Office of Education. Its revised functions are set out in Section 14 of Part 3 of the Act which is quoted below :—

“ 14. The functions of the Commission shall, subject to the regulations and any directions of the Minister, be—

- (a) to arrange, as prescribed, for the training in Universities or similar institutions, for the purpose of facilitating their re-establishment, of persons who are discharged members of the Forces within the meaning of the Re-establishment and Employment Act 1945 ;
- (b) in prescribed cases or classes of cases, to assist other persons to obtain training in Universities or similar institutions ;
- (c) to provide, as prescribed, financial assistance to students at Universities and approved institutions ; and
- (d) to advise the Minister with respect to such matters relating to university training and associated matters as are referred by the Minister to the Commission for advice.”

With cessation of hostilities, the Commission was no longer called upon to administer the scheme of reservation but added to its functions that of administering training under the Commonwealth Reconstruction Training Scheme insofar as it applies to Universities and similar institutions. The end of war meant a large increase in the number of applicants for university-type training under the Commonwealth Reconstruction Training Scheme.

To deal effectively with the increased number of intending students it was found necessary at the end of 1945 to establish Branch Offices in each of the five main Universities, that is, Sydney, Melbourne, Adelaide, Queensland and Western Australia, and to have a Branch Officer stationed in Hobart. The Branch Offices handle all applications for assistance under both the Commonwealth Reconstruction Training Scheme and the financial assistance scheme and give individual consideration to each case. They work in close co-operation with the Universities.

2. Financial Assistance.—(i) *General.* In order to make the best possible use of university facilities, the Commonwealth Government has adopted, through the Universities Commission, the policy of endeavouring to attract able students to the Universities. To this end a scheme of financial assistance has been introduced. Under this scheme assistance is available (subject to a means test) to selected full-time students undertaking any one of the following courses :—(1) University Courses : (i) At any Australian University undergraduate courses leading to a primary degree in Agriculture, Architecture, Arts, Dentistry, Economics or Commerce, Education, Engineering, Law, Medicine, Music or Veterinary Science ; and (ii) Courses leading to the Diploma of Social Studies (or Social Science) at the University of Sydney, Melbourne and Adelaide. (2) Technical College Courses : Full-time day diploma courses in Aeronautical Engineering, Applied Chemistry, Applied Science, Architecture, Automotive Engineering, Building Construction, Chemical Engineering, Civil Engineering, Communication Engineering, Electrical Engineering, Industrial Chemistry, Mechanical Engineering, Metallurgical Engineering, Metallurgy, and Mining Engineering at certain approved Technical Colleges, Technical Schools, and School of Mines. (3) Other Courses : (i) Course in Almonry at the New South Wales Institute of Hospital Almoners ; (ii) Course in Dentistry at the Perth Dental College.

(ii) *Scale of Assistance.* The maximum amount of assistance granted to a student is the payment of all his university fees plus a living allowance of £130 per annum if he is living with a parent, or £169 per annum if he is not living with a parent. In addition, an allowance of up to £10 may be made over the whole course towards the cost of the purchase or hire of necessary instruments. The maximum assistance is payable when the adjusted income does not exceed £250 per annum. For every £10 by which the adjusted income exceeds £250 per annum, the assistance is reduced by £4 per annum.

The adjusted income is ascertained by taking the taxable income of the student and of his parents and by deducting therefrom £50 for each dependent child under sixteen years of age. The assistance is supplementary to any other assistance which a student receives and the Commission deducts from its assistance the value of any scholarship or other award held by a student. From 1st July, 1948 until 10th January, 1949, the amount of the living allowance was £117 per annum if living with a parent or £156 per annum if not living with a parent. Until 1st January, 1949, the reduction rate was £5 4s. for every £10 by which the adjusted income exceeded £250.

(iii) *Number of Students Assisted.* The following table shows the number of students assisted in the various faculties in each University in 1948 :—

NUMBER OF STUDENTS ASSISTED IN EACH FACULTY, 1948.

Course.	Sydney.	Mel-bourne.	Queens-land.	Adelaide.	Western Australia.	Tasmania.	Total.
Agriculture	30	17	6	8	17	1	79
Almonry	5	2	..	2	..	..	7
Architecture	18	3	1	2	..	..	24
Arts	118	30	19	15	44	6	232
Dentistry	57	24	16	21	5	..	123
Economics or Commerce ..	11	8	6	1	..	1	27
Engineering	113	37	(a) 45	39	43	4	281
Law	11	6	2	11	4	1	35
Medicine	215	92	(b) 66	86	9	..	468
Science	127	80	20	43	61	10	341
Social Science	8	8	..	6	..	..	22
Veterinary Science	40	1	7	1	1	..	50
Music .. ..	..	4	..	1	..	..	5
Total	753	312	188	234	184	23	1,694

(a) Includes Applied Science.

(b) Includes Medical Science.

The number of students assisted in Technical Colleges in 1948 was 214.

3. *Commonwealth Reconstruction Training Scheme.*—(i) *Benefits.* A general description of the Commonwealth Reconstruction Training Scheme is given in section 11 which is devoted to the scheme as a whole. In addition to the normal benefits there described, some further benefits are available to university students.

At the request and the cost of the Commission, Guidance Officers have been appointed to help Reconstruction Trainees, and students are encouraged to consult the Guidance Officers on any of their problems. These Officers have contacts with the teaching and administrative staffs of the Universities and are able to obtain advice regarding the students' progress and difficulties.

One of the main activities of Guidance Officers has been to arrange for full-time and part-time interim training in the period between the date of discharge and the commencement of the university year. A limited amount of special concurrent tutorial assistance also was arranged.

(ii) *Number of University and University-Type Trainees who have Completed Courses.* The following table gives the number of full-time trainees who have completed various University-type courses in the several States.

NUMBER OF RECONSTRUCTION TRAINEES WHO HAVE COMPLETED FULL-TIME UNIVERSITY-TYPE COURSES (INCLUDING REFRESHER COURSES) UP TO 31st OCTOBER, 1948.

Course.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Agriculture	12	15	2	6	4	..	39
Architecture	22	2	1	1	..	..	26
Arts	77	43	13	12	24	9	178
Dentistry	84	50	49	1	4	..	188
Economics or Commerce ..	23	39	4	7	1	4	78
Education	41	14	..	1	3	1	60
Engineering	49	34	17	37	29	5	171
Law	117	111	32	20	39	10	329
Librarianship	16	..	..	..	..	..	16
Medicine	245	189	14	54	9	1	512
Music	31	17	1	7	4	1	61
Nursing	358	204	42	70	47	42	763
Pharmacy	11	53	..	6	..	..	70
Physical Education	11	8	..	..	..	..	19
Physiotherapy	82	57	5	..	..	..	144
Public Service	54	41	..	..	..	..	95
Science	51	55	17	13	17	4	157
Social Studies	20	3	..	15	..	..	38
Teaching	711	209	311	20	205	55	1,511
Theology	101	73	5	47	12	2	240
Univ. Ext. (Ref.) Board ..	..	18	..	..	..	..	18
Veterinary Science	38	..	2	..	..	..	40
Welfare Officer .. ..	..	19	..	..	..	..	19
Other	28	17	2	2	2	..	51
Total	2,182	1,271	517	319	400	134	4,823

In addition, at 31st October, 1948, there were 6,403 trainees in training in part-time courses. Two thousand seven hundred and sixty had completed part-time courses.

(iii) *Reconstruction Trainees Pursuing University-Type Courses at 31st October, 1948.* The following table shows the number of full-time trainees in training in various University-type courses at 31st October, 1948.

NUMBER OF RECONSTRUCTION TRAINEES IN TRAINING IN UNIVERSITY-TYPE COURSES AS AT 31st OCTOBER, 1948.

Course.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Agriculture	70	81	21	16	30	..	218
Architecture	136	58	34	29	..	..	257
Arts	534	395	69	89	122	7	1,215
Dentistry	397	132	87	37	30	1	684
Economics or Commerce ..	135	445	65	93	..	16	754
Education	21	34	..	25	14	..	94
Engineering	484	245	109	155	99	30	1,122
Forestry	21	10	..	7	2	1	41
Kindergartening	11	4	3	3	..	..	26
Law	404	260	90	56	58	27	895
Medicine	480	354	151	142	21	5	1,153
Music	81	77	1	17	3	1	180
Nursing	290	270	175	97	124	21	977
Occupational Therapy	19	6	..	..	..	..	25
Pharmacy	154	154	..	30	..	..	338
Physical Education	27	16	1	8	..	..	52
Physiotherapy	40	33	11	12	..	..	96
Qualifying .. ..	..	197	..	..	..	..	197
Science	319	254	135	109	92	23	932
Social Studies	25	15	..	20	..	..	60
Surveying .. ..	..	..	26	..	4	..	30
Teaching	187	140	84	91	176	16	694
Theology	154	78	39	38	5	4	318
Veterinary Science	137	6	22	2	1	..	168
Other	22	34	..	..	3	..	59
Total	4,148	3,298	1,123	1,076	789	152	10,586

(iv) *University Facilities.* With the influx of students under the Commonwealth Reconstruction Scheme immediate provision had to be made for the alterations and extensions of existing University buildings and for the erection of new ones. Additional equipment also had to be supplied.

The Commonwealth Government offered to provide finance on the following terms and each State and University accepted these terms :—

- “(a) That the Commonwealth meet the cost in the first instance of erecting essential additional buildings and plant required for Reconstruction Training at Universities ;
- (b) In the case of temporary buildings or plant of a temporary nature, the assets to remain the property of the Commonwealth and to be disposed of as necessary after the need for their use is ended ;
- (c) Where the buildings or plant are of a permanent nature the Commonwealth to meet the cost of erection in the first instance so as to ensure expedition on the distinct understanding that the buildings and plant will be taken over by the University on a basis to be determined by agreement between the Commonwealth and State and the University having regard to the permanent value of the buildings and plant to the University ; and
- (d) The Commonwealth would bear the cost of special internal structural alterations ”.

The following table shows the amount of Commonwealth moneys allocated to finance buildings at the Universities :—

University.	Permanent Buildings.	Permanent Alterations.	Temporary Buildings.	Total
	£	£	£	£
Sydney	191,256	14,238	63,118	268,612
Melbourne	177,725	1,498	14,159	193,382
Queensland (Brisbane) .. .. .	..	..	4,322	4,322
Adelaide	262,589	..	..	262,589
Western Australia (Perth)	89,247	..	25,069	114,316
Tasmania (Hobart)	11,672	1,500	32,302	45,474
New England University College .. .. .	..	..	39,180	39,180
Total	732,489	17,236	178,150	927,875

For equipment the following amounts have been allocated :—

University.	Permanent Equipment.	Temporary Equipment.	Gift.	Total.
	£	£	£	£
Sydney .. .. .	..	..	40,000	40,000
Melbourne	98,015	3,525	..	101,540
Queensland (Brisbane)	109,318	15,271	..	124,589
Adelaide	97,556	7,628	..	105,184
Western Australia (Perth)	42,786	3,513	..	46,299
Tasmania (Hobart)	19,766	..	..	19,766
Total	367,441	29,937	40,000	437,378

The Commonwealth Government agreed to pay the Universities the full cost of teaching all Reconstruction Trainees. The Universities Commission therefore pays each University a subsidy as running costs in addition to fees.

In 1948 the Commission made fee payments to Universities for Reconstruction Trainees amounting to £499,122 and in addition paid subsidies amounting to £359,536.

§ 9. Technical Education.

1. **General.**—Provision has been made in all States for many forms of technical education and the rapid expansion of manufacturing industries in recent years is increasing the demand for technically trained personnel, while the technical training by the Department of Labour and National Service and the Commonwealth Reconstruction Training Schemes have been in operation for some years. (*See §§ 10 and 11 following.*)

In preceding issues of the Official Year Book an outline was given of the origin and development of technical education in each State (*see No. 22, pp. 447-51*), but considerations of space preclude the inclusion of more up-to-date information.

2. **Schools, Teachers and Students.**—The numbers of schools, teachers and enrolments of individual students during 1947 are given in the following table:—

TECHNICAL EDUCATION : SCHOOLS, TEACHERS AND ENROLMENTS, 1947.

State.	Schools or Colleges.	Teachers.			Individual Students Enrolled.	
		Full-time.	Part-time.	Total.	Male.	Female.
New South Wales ..	36	1,002	1,659	2,661	45,242	14,058
Victoria(a) ..	32	1,090	1,160	2,250	42,955	10,895
Queensland ..	12	114	202	316	9,319	3,023
South Australia ..	22	(b)	(b)	542	9,548	6,804
Western Australia ..	10	106	99	205	7,903	2,744
Tasmania(a) ..	7	31	234	265	3,568	1,525
Total 1947 ..	119	..	..	6,239	117,635	39,049
1946 ..	117	..	..	5,939	109,098	36,356

(a) Includes junior enrolments, 9,400 males and 1,510 females in Victoria, and 820 males and 72 females in Tasmania, as teaching staff and expenditure cover both senior and junior sections. (b) Not available.

The numbers of individual scholars enrolled during the years 1939 and 1943 to 1947 are given in the table following. In order to make the figures comparable, enrolments at Junior Technical Schools are omitted from the Victorian and Tasmanian figures.

TECHNICAL EDUCATION : INDIVIDUAL STUDENTS.

State.	1939.	1943.	1944.	1945.	1946.	1947.
New South Wales ..	37,264	34,940	39,750	42,767	49,952	59,300
Victoria ..	28,844	27,389	31,533	33,905	41,942	42,040
Queensland ..	6,397	6,659	8,416	10,049	11,912	12,342
South Australia ..	9,721	10,952	12,534	14,178	16,175	16,352
Western Australia ..	5,673	5,499	5,417	6,991	9,750	10,647
Tasmania ..	1,316	2,130	2,559	2,951	4,207	4,201
Total ..	89,215	87,569	100,209	110,841	133,938	144,882

3. **Expenditure.**—The expenditure on technical education in each State for 1947 is shown below :—

TECHNICAL EDUCATION : EXPENDITURE, 1947.

(Including Loan Fund Expenditure.)

(£)

State.	Salaries and maintenance.	Equipment.	Buildings.	Total Expenditure.	Receipts—Fees, etc.	Net Expenditure.
New South Wales ..	786,390	164,186	75,248	1,030,296	221,738	808,558
Victoria(a) ..	762,431	33,003	140,825	1,012,639	181,217	..
Queensland ..	120,586	38,325	8,097	176,008	28,455	147,553
South Australia ..	151,065	4,603	34,642	190,710	35,993	154,717
Western Australia ..	114,015	20,345	30,601	164,961	26,762	138,199
Tasmania(a) ..	74,523	18,937	17,822	111,282	2,209	109,073
Total 1947 ..	2,018,010	279,399	307,235	2,685,896	496,374	..
1946 ..	1,657,554	193,879	286,121	2,216,141	427,116	..

(a) Includes the expenditure on Junior Technical Schools.

Fees and other receipts are paid into Consolidated Revenue in all States except Victoria, where they are retained and spent by the Technical School Councils. The expenditure on buildings is largely financed from loan moneys, the sums provided from this source in 1947 being (the expenditure in 1946 is shown in brackets) :—New South Wales, £39,633 (£46,004); Victoria, £131,040 (£158,342); Queensland, £5,091 (£7,086); South Australia, £10,231 (£4,138); Western Australia, £20,351 (£694); and Tasmania, £13,818 (£16,315).

The expenditure on maintenance for technical education in Australia in 1947 amounted to 6s. 3d. per head of population, as compared with 48s. per head expended on maintenance for primary and secondary education.

§ 10. Commonwealth War-time Technical Training Scheme.

1. **Origin of the Scheme.**—The Commonwealth Technical Training Scheme was originated during the 1939–45 War to provide for the training of civilians and Armed Services personnel to make up the deficiency of skilled artisans for the production of aircraft and munitions and to meet the demand of the Armed Services for skilled technicians.

The origin of the Scheme and its administration by the Industrial Training Division, Department of Labour and National Service, is given on page 250 of Official Year Book No. 37.

2. **Training.**—Training under the Scheme did not terminate with the cessation of hostilities in September, 1945, as the Navy Department continued to make use of the facilities for the training of some of its personnel as radio mechanics. However it was eventually decided to establish a school for this type of training within the Navy Department and training under the Scheme terminated on 29th April, 1949. During the period of operation of the Scheme—from 18th December, 1939, to 29th April, 1949—instruction was given in 78 different types of courses in centres established in 60 Technical Colleges throughout Australia.

3. **Persons Trained.**—Up to the 29th April, 1949, 119,717 persons had completed a course of training. The figures for each State and Service are as follows:—

**COMMONWEALTH WAR-TIME TECHNICAL TRAINING SCHEME: PERSONS
COMPLETED TRAINING AT 29th APRIL, 1949.**

Service.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	A.C.T.	Total.
Navy	17	325	..	199	..	..	..	541
Army	7,199	7,607	6,099	1,165	3,215	300	..	25,585
Air	21,391	24,055	51	15,644	3,726	249	5,223	70,339
Munitions and Aircraft Production	6,223	9,819	2,609	2,433	1,321	533	314	23,252
Total	34,830	41,806	8,759	19,441	8,262	1,082	5,537	119,717

§ 11. Commonwealth Reconstruction Training Scheme.

1. **Object of the Scheme.**—The object of the Commonwealth Reconstruction Training Scheme is to provide training to enable ex-service men and women and certain special non-service personnel to become re-established in suitable civilian occupations.

2. **Persons Eligible under the Scheme.**—Applications for full-time or part-time training under the Scheme may be lodged within twelve months of discharge by members of the Defence Forces who enlisted before 30th June, 1947, and who, after at least six months' service (except in war-disablement cases), are honourably discharged on or before 30th June, 1949, provided they come within one of the approved categories of eligibility. Provision is made for similar training benefits to be granted to war widows. Members who have a war-caused disability, and widows of servicemen whose death is accepted as being due to war service, may apply for benefits up to 30th June, 1950.

Certain non-service personnel are also eligible to apply for training, viz., representatives of philanthropic bodies, such as the Red Cross, accredited to and serving with the Forces, war correspondents and photographers employed by the Commonwealth, Australian merchant seamen and canteen personnel of R.A.N. ships, and members of the Australian Women's Land Army, who because of war-caused incapacity are unable to return to their pre-war employment.

Selection of eligible applicants for training depends on their suitability for the proposed course and, in the case of vocational trainees, on the existence of satisfactory opportunities for remunerative employment in the calling for which they have applied.

3. **Types of Training.**—The Commonwealth Reconstruction Training Scheme provided three types of training—(a) University type (professional); (b) Technical type (professional or vocational); and (c) Rural training.

Professional training follows normal lines at a university or similar institution. Vocational training includes most types of trade training given at technical colleges or schools. Members selected for vocational training usually receive approximately six months' basic training. On reaching an assessed proficiency of 40 per cent., they are placed in subsidized employment and are paid the full adult wage or determination for the trade concerned, the employer being reimbursed in the form of a wage subsidy according to the trainees' lack of proficiency. Proficiency is reviewed regularly and the subsidy adjusted accordingly.

Rural training is available in the following forms, according to the circumstances in each case:—(a) Practical training for a period of up to two years on an approved farm; (b) An intensive course in farm management of about eight weeks' duration; and (c) Courses at agricultural colleges or similar institutions.

4. **Allowances.**—Full-time trainees receive allowances ranging from £3 15s. per week for a single man to £5 15s. per week for a married man with dependants. In addition, all tuition fees are paid and allowances provided for fares, books and instruments. Trainees may claim a special allowance if they are required to live away from home.

5. **Part-time Training.**—Tuition fees and expenses incidental to tuition (such as books), up to a limit of £60, are payable in respect of members accepted for part-time training.

6. **Legal Authority.**—Legal authority for the scheme is contained in the Re-establishment and Employment Act, No. 11, 1945, Part III.

7. **Organization and Administration.**—The Scheme is administered by executive committees within the Ministry of Post-war Reconstruction. The Commonwealth Reconstruction Training Committee as the central committee has the functions of general planning, organization and direction. Membership of this committee comprises representatives of the Ministry of Post-war Reconstruction (Chairman), Repatriation Commission, Universities Commission and the Department of Labour and National Service, and three members appointed by the Minister and drawn from organizations of employers, employees and ex-servicemen.

The detailed administration and execution of the scheme is carried out by Regional Reconstruction Training Committees, of which there is one in each capital city. Associated with the Regional Committee are Professional, Industrial and Rural Sub-Committees made up of employee and employer representatives in the particular calling with a representative of the training authority concerned.

To 31st May, 1949, full-time enrolments had been made in approximately 375 different courses and part-time enrolments in more than 750 different courses.

The Scheme commenced to operate in a limited way in March, 1944, and the number of ex-service men and women who had commenced training between that date and 31st May, 1949, was as follows :—

**COMMONWEALTH RECONSTRUCTION SCHEME: NUMBER OF TRAINEES AT
31st MAY, 1949.**

Particulars.	Males.	Females.	Persons.
Technical Type Training—			
Full-time	58,456	5,493	63,949
Part-time	145,711	15,817	161,528
University Type Training—			
Full-time	15,830	3,189	19,019
Part-time	11,559	1,149	12,708
Rural Training—Full-time	4,811	23	4,834
Total	236,367	25,671	262,038

§ 12. Libraries.

1. **Commonwealth.**—(i) *Parliamentary and National Library.* When the Commonwealth Parliamentary Library was created in 1902, it was recognized that when the Australian Capital was established it would be necessary to have available there, for the use of Members, Government Departments and the public, a library sufficient for their requirements, and therefore wider in scope than a purely Parliamentary Library. The ideal of a great general library was kept in view, and standard works were systematically acquired. At the same time, the first Library Committee conceived the idea of a National Library for the use and benefit of the people of Australia. The policy was therefore pursued of securing, as far as possible, all works and documents connected with the discovery, settlement and early history of Australia, New Zealand and the Pacific Islands.

In 1909 a valuable collection of *Australiana*, comprising about 10,000 volumes and 6,500 pamphlets, maps, documents and pictures—the library of Mr. E. A. Petherick—was acquired. In 1912 a provision was included in the Commonwealth Copyright Act requiring the publisher of every book, pamphlet, etc., printed in Australia to supply a copy free to the library. In the same year the publication of the *Historical Records of Australia* was begun, and 34 volumes were issued before publication was temporarily suspended in 1926. During 1945 arrangements were completed for the microphotographic copying of all material relating to Australia and the Pacific in the Record Office, London. This project, which was interrupted by the war, is being undertaken by the Commonwealth National Library and the Mitchell Library in partnership, and will enable compilation of the *Historical Records of Australia* to be resumed.

The rapid development of the Australian and National sections of the Library, together with the purchase of the Cook manuscripts, persuaded the Library Committee in 1923 that the title "Commonwealth National Library" should be adopted. Consequent upon the transfer of the Library to Canberra in 1927 the policy of dividing the library into two sections was adopted—the Parliamentary reference collection to be housed in Parliament House and the National and Public section in a separate building, both to remain under the one general administration. The erection of the first wing of the permanent National Library building was completed in 1935, and is designed to meet the requirements of University students and the general public, to whom the privileges of the Library have been extended in respect to borrowing as well as reference. The design for the complete building makes ample provision for the housing of special collections and for the proper display of the valuable records of Australian history which the Library possesses. In 1936 a further development in the scope of the National Library was the establishment of an Historical Film and Speaking Record Section.

The work of the National Library was also extended in 1936 as the result of a grant of \$7,500 in three annual instalments of \$2,500 from the Carnegie Corporation of New York for the establishment of library and reading facilities in outlying Australian Territories. This amount was subsidized by the Commonwealth Government on a £1 for £1 basis. The war resulted not only in the cessation of much of this service, but in the loss of much material in New Guinea, Papua and the Northern Territory. The system is being reconstituted in an enlarged way on the basis of free library service provided by various Commonwealth administration authorities.

The free Papua-New Guinea Public Library established at Port Moresby is administered by an officer of the National Library. Branches have been established at Rabaul and Lae and a country section sends book boxes and parcels to outlying residents, such parcels being accepted for free delivery by the post office.

In 1940 Gregory M. Mathews, O.B.E., presented to the National Library his collection of Australian ornithological works comprising approximately 4,000 items.

To meet increased demands made on the library during the war by Government Departments in Melbourne, the library operated a liaison office there from 1942 to 1946.

Consequent on the report of the War Archives Committee appointed by the Prime Minister in 1942 the Library was created a provisional archives repository for administrative records of the non-service departments, and the War Memorial for those of the Services.

During the war, overseas information libraries were established in six countries, those in London and New York being administered by trained officers of the Library. In 1946, following an agreement between the Departments of External Affairs, Information, and Commerce and Agriculture, the Library undertook to provide information and reference libraries for all overseas posts where there was official Australian representation. The amount provided for these services has risen from £500 in 1944 to £2,500 in 1946, the number of overseas libraries having increased from two in 1944 to thirty-five in 1948.

With the establishment of the National Film Board early in 1945, the National Library became a central library and distributing agency for educational and documentary films. The collection now includes over 1,000 titles and detailed information on more than 2,000 films has been provided by the Library's advisory service. A provisional catalogue of known films at present in Australia has been issued.

By direction of Cabinet, and as a result of the establishment of a Publications Exchange Advisory Committee, an exchange agency will shortly be operated by the Library, with the object of co-ordinating and developing Commonwealth exchanges with State and foreign institutions and governments.

The number of volumes in the National and Parliamentary collections was, at the end of June, 1948, 234,700, the outstanding feature of the National section being a unique collection of Captain Cook manuscripts, while the Parliamentary section contains an extensive series of official publications of Great Britain, the Dominions, and foreign countries. The following publications are issued by the Library :—Historical records of Australia—34 volumes, 12s. 6d. per volume ; Parliamentary Handbook and record of elections—ten issues, 10s. 6d. per volume ; Annual catalogue of Australian publications—eleven issues, 2s. per volume ; Select list of representative works dealing with Australia (reprinted from the Official Year Book) eleven issues ; Australian Public Affairs Information Service : subject index to current literature (monthly).

Training of librarians has been undertaken by the Library since 1939, and there is now a formal course for departmental and other librarians. This was limited in 1948 to residents of Canberra owing to the acute shortage of accommodation.

(ii) *Patent Office Library.* The free library attached to the Commonwealth Patent Office, Canberra, contains over 64,000 volumes. Patent specifications of inventions are received from the principal countries of the world, together with official publications dealing with Patents, Trade Marks and Designs. A wide range of technical literature and periodicals is available.

(iii) *Other Departmental Libraries.* Several Commonwealth Departments in Canberra now have libraries. The following Departments have specialized collections in their own fields, and in addition draw largely on the National Library :—Attorney-General's Department, Australian War Memorial, Bureau of Agricultural Economics, Commonwealth Bureau of Census and Statistics, Department of Commerce and Agriculture, Department of External Affairs, Department of External Territories, Department of Health and Department of Trade and Customs. Libraries established in various war-time departments have functioned chiefly as reference and borrowing agencies, having very small book collections of their own.

For the past few years the library of the Department of Commerce and Agriculture has had its main activities in Melbourne, where important sections of the Department were located in the war years. The Department of Labour and National Service has its main library in Melbourne, and a branch library in Sydney. Other departmental libraries in Melbourne are those of the Department of Air, Department of Defence, Department of Social Services and Postmaster-General's Department. The library of the Commonwealth Office of Education was begun in Sydney during 1945.

(iv) *Commonwealth Scientific and Industrial Research Organization.* In addition to the library at the head office at East Melbourne, the Commonwealth Scientific and Industrial Research Organization now has libraries of varying sizes attached to each of its Divisions, Laboratories and Sections. Of these, there are six in New South Wales, six in Victoria and one in South Australia. The head office catalogue records all material held in branch libraries.

2. *States.*—(i) *General.* Library activity has developed to a marked degree in recent years, and in five States legislation has been passed to increase the scope and usefulness of library service.

(ii) *Metropolitan Public Libraries.* In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favorably with similar institutions elsewhere in the world. The following statement gives the number of volumes in the Public Library of each capital city at 30th June, 1948 :—

METROPOLITAN PUBLIC LIBRARIES, 30th JUNE, 1948.

		Number of Volumes in—			Total
City.		Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Canberra(a)	.. ..	234,700	..	(b)	234,700
Sydney	(c)	445,653	(d)	123,117	568,770
Melbourne .. ..	..	505,884	61,127	24,542	651,553
Brisbane .. ..	..	51,472	..	..	51,472
Adelaide .. ..	..	209,831	18,719	(e) 60,514	289,064
Perth .. ..	..	180,688	..	(f) 10,162	190,850
Hobart .. ..	..	36,161	16,807	(g) 71,518	124,516

(a) Includes Parliamentary section. (b) Books are lent to libraries or students throughout Australia whenever necessary for research work. (c) Includes 146,013 volumes in the Mitchell Library. (d) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. At 31st December, 1946, the books numbered 67,519. (e) Includes 17,945 in the Country Lending Service, 5,257 in Children's Branch and 21,192 in Children's Book Service, 7,510 in the Symon Library and 8,610 in the Australian duplicate collection. (f) Includes 7,563 volumes in the School Libraries Branch. (g) Includes 45,333 volumes in the Children's Branch.

(iii) *New South Wales.* The Free Library Movement in New South Wales, founded for the establishment of a system of public libraries on the basis suggested in the Munn-Pitt Report of 1935, helped to pave the way for the Library Act, 1939, which was fully proclaimed as from 1st January, 1944. The Library Board was fully constituted in 1944, and came into effective operation in September of that year. Seventy local authorities have adopted the Library Act, and during 1947 spent £65,255 on their libraries from rates, as well as £25,600 received in subsidy. This represents in all 2s. per head for 30.43 per cent. of the State's population. There are 43 libraries being operated by 56 councils.

The Joint Coal Board made grants for library purposes to Councils in coal mining areas, a grant of £5,000 having been made to the City of Greater Wollongong to help establish a mobile library service to mining centres, and a grant of £4,150 to the City of Greater Newcastle to meet part of the cost of establishing a library at Wallsend.

The State Library has been housed since 1942 in a new building, whose reading room provides seating accommodation for 500 persons, and has 50,000 volumes in open access. Within four years, however, the old building had to be reoccupied in part owing to lack of space caused by the Library's extended functions.

New South Wales departmental libraries are staffed by officers seconded from the State Library, which also provides a central book buying and master cataloguing service for departmental libraries, and municipal and shire libraries constituted under the 1939 Act.

The Library School, which was established in 1939, has increased rapidly in numbers, until in 1946 the number of students reached 60. Students are trained in librarianship and are prepared for the examinations of the Australian Institute of Librarians.

In 1943 the Banks Memorial Trust was set up to report on the best use of funds which had accumulated since 1905. The government has approved of a memorial at Kurnell, and of the publication of the Banks Papers, a project which will be undertaken by the State Library in the next two or three years.

The State Library has undertaken to reorganize the libraries of the University Tutorial Class and the Workers' Educational Association, and all class libraries, discussion notes, and gramophone records for university tutorial classes are circulated from the State Library.

The State Library grant, including the vote for the Country Circulation Department, after being unchanged for about twenty years, is gradually being increased. In connexion with the Country Circulation Department it may be noted that books are forwarded on loan to State schools, to Schools of Arts and to individual students. During 1947-48, 94,519 books were lent to small State schools, 33,384 to Schools of Arts and small country libraries, while 39,250 reference works were lent to individual country students.

The Mitchell Library in Sydney of more than 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia and the Southern Pacific, and valued at £100,000, was bequeathed to the trustees of the Public Library in 1905 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testator stipulated that the regulations of the British Museum were to be adopted as far as was practicable, hence the library is the resort of specialists. There are now 146,013 volumes in the library in addition to valuable manuscripts, collections of Australian postage and fiscal stamps, and various pictures, coins, etc.

In Newcastle, Dr. Roland Pope has given his collection, worth £10,000, which is being housed temporarily at the School of Arts until a reference library is built.

Other important libraries in New South Wales are the Australian Museum, 32,500 volumes; Teachers' Colleges, 90,236; Technical Education Branch, 46,416; Public Schools (Primary), 601,652; (Secondary), 240,314; Railways' Institute, 151,230; Road Transport and Tramways Institute, 40,912; Cooper Library of the New South Wales Public School Teachers' Federation, 17,467; and the library at the National Herbarium, 10,000 volumes. At 30th June, 1948, the Parliamentary Library contained 99,750 volumes.

(iv) *Victoria.* A Library Service Board was appointed in 1940 to inquire into the adequacy of existing library service and prepare plans for development. In November, 1944, it produced a comprehensive report, which recommended the establishment of a State Libraries Board, and suggested a plan for State financial aid. This has been implemented by the passing in December, 1946, of the Free Library Service Board Act, and the establishment of a Free Library Service Board of nine members representing the Public Library of Victoria, municipalities within and outside the metropolis, the Library Association of Victoria, the Education Department, the Victorian Branch of the Australian Institute of Librarians, and the Government itself. The functions of the Board are to assist in the organization and promotion of free library services by municipal and other authorities, to register libraries, recommend the allocation of grants, promote library service in State schools, and to provide advisory services to registered free libraries and associated institutions. The Act empowers the Public Library of Victoria, after consultation with the Board, to establish a school for the training of librarians, and to conduct examinations in librarianship.

Present library service in Victoria is for the most part confined to Mechanics' Institutes, which are not largely effective apart from those at Geelong and Ballarat. Several excellent municipal libraries exist in the metropolitan area. A conference on public libraries in Victoria was held in June, 1948, to formulate plans for the improvement of library services.

The Government makes a grant of £5,500 to country libraries, distributed as follows:—Each applicant library receives £10 10s.; a further grant of £2 for £1 is made to libraries which receive grants from their own municipal authorities, while £1 for £1 is granted for local donations. The maximum amount granted to any library is £200. The main condition is that the library make a certain number of books (not a fixed number, and not necessarily all its books) freely accessible to the public. The subsidy of £1 for each £1 donated is reckoned on the total donations received, even if they are in very small individual amounts.

Two bibliographical works issued in Victoria are a union list of medical periodicals in Melbourne hospitals and libraries, compiled by the staff of the University Library, and a list of periodicals held by all branches of the Commonwealth Scientific and Industrial Research Organization.

With the passing of the Public Library Act 1944, the Public Library of Victoria was separated for administrative purposes from the National Gallery and the Museum, and is now controlled by a Board of seven members concerned with the Library only. The Library provides reference services with a collection of some 566,000 volumes, 2,500 current periodicals and 450 current newspapers; lending services to metropolitan borrowers; country lending services to individual readers throughout the State; and travelling library services by a box system to rural and provincial libraries.

The Reference Library reading room ranks amongst the finest in the world. It was opened in 1913 and has a diameter and height of 114 feet, and is capable of seating 320 readers at a time, with an additional 50 readers in a special Art Room. The Library is particularly strong in *Australiana*, early and fine modern printing, English county records and genealogy, *Shakespeareana* and the fine arts. Associated with the Reference Library is the Victorian Historical Collection containing 13,000 documents, maps, paintings and other items illustrating the history of the State.

(v) *Queensland*.—Prior to 1945 Queensland's library needs were met by the State Public Library, established in 1902 and administered by the Chief Secretary's Department, and by Schools of Arts or similar libraries established in metropolitan and country districts and supported chiefly by members' subscriptions.

The Libraries Act, 1943, constituted a Library Board "to attain efficient co-ordination and improvement of the library facilities of the State with the object of placing such facilities on a sound basis for the benefit and educational improvement of the citizens generally throughout the State". To the Board which has been appointed are entrusted the control and management of the Public Library and of branches which, under the Act, may be established in various parts of the State by the Governor-in-Council.

With regard to the Public Library, the Board has initiated a large-scale buying programme with the object of building up a well-balanced book collection and of so making the Library not only an educational and cultural centre but also a public information bureau. The Public Library's holdings number 50,000 volumes.

The Board's long-range policy is the planning of a State-wide and co-ordinated system which will eventually measure up to accepted modern standards of library service. Meantime a short-range programme is being put into effect for the purpose of obtaining as complete a coverage of the State as possible. Subsidy is allowed to local bodies on a £1 for £1 basis, and books have been made available in bulk to the Queensland Schools of Arts Association, also to the Queensland Bush Book Club and the Bardon Children's Free Library, but they remain the property of the Board and are subject to recall.

The Act empowers local authorities to establish library facilities and to take over the management, control and conduct of Schools of Arts when requested to do so by the trustees of the Schools of Arts or when the local authority deems it advisable. To date, nine Schools of Arts have been taken over by local authorities, while 90 local bodies in all have received subsidy.

A country extension service for people residing outside the metropolitan area is in course of preparation. Its function will be primarily educational and it is designed to bring library facilities to readers in remote areas.

The Oxley Memorial Library was established under the terms of a Declaration of Trust dated 26th August, 1926, from the balance of moneys remaining in the Oxley Centenary Fund. Its object is the promotion of the study and general knowledge of Australian literature and of literature relating to Australia. The Library, housed in the Public Library since 1934, remained under separate administration until 1946 when, by the Oxley Memorial Library of Queensland Act, its assets were transferred to and vested in the Library Board. Since that date it has been administered as a department of the Public Library and the collection, now consisting of some 40,000 items built up by

purchases and donations, has been kept segregated. It is Queensland's historical research centre, containing journals of the early explorers, records of the convict settlement at Moreton Bay and numerous volumes dealing with Queensland history and development. A notable feature is its collection of Queensland poetry.

The library of the Parliament of Queensland was established in 1860. It contained at 1st July, 1948, approximately 72,000 volumes devoted largely to history and the social sciences. The library is being reorganized and in February, 1948, the task of installing a standard card catalogue and the Dewey system of classification was commenced.

(vi) *South Australia.* Following the Price Report of 1937, which stressed the need for a free lending service for metropolitan and country readers, and suggested the establishment of a State Libraries Board, the Public Library of South Australia was separated from the Museum and Art Gallery early in 1940 and became a government department, administered by a Principal Librarian and a Libraries Board.

In March, 1946, the greater part of the Library was thrown open for free public borrowing. Over 14,430 borrowers have been enrolled and books are being lent at the rate of about 217,000 volumes a year.

The Library's Country Lending Service, begun in 1938, has 7,763 registered borrowers, including children, and has built up its collection from 4,000 to 17,945 volumes for adults and 21,192 books for children. In addition 614 schools use the box service, 101,883 books being issued during 1947-48.

A Research Service, established in 1942, receives about 500 inquiries per month. It supplies lists of references, and arranges for borrowing of books and periodicals selected from those lists as well as books and photostats procured from interstate and overseas libraries. The service has an extensive trade catalogue collection.

During the year ended 30th June, 1948, books added to the reference library numbered 1,908, making a total of 209,831. In addition there were 7,510 in the Symon Library, 30,137 (including 21,192 in the Children's Book Service) in the Country Lending Service, 5,257 in the Children's Library, 8,610 in the Australian duplicate collection, 18,719 in the Adelaide Lending Service, making a total of 289,064 at 30th June, 1948.

In 1921 the Archives Department of the Public Library of South Australia was established for the collection of original South Australian historical material. Legislation has been passed forbidding the destruction of government documents without reference to the Libraries Board. Considerable use is made of the collections, which on 30th June, 1948, consisted of 358,647 documents, 20,681 views, and 2,175 maps.

The Institutes Association in 1948 comprised 258 suburban and country libraries with 768,046 volumes.

(vii) *Western Australia.* During 1944 the Government appointed a provisional committee to report on the question of establishing free lending libraries in country centres. The scheme outlined in its report of January, 1945, was accepted, and a permanent Country Free Lending Libraries Committee established. In order to commence a library service for rural areas £1,000 was placed on the estimates for 1945 and 1946, funds being made available on a £1 for £1 basis up to £50. By July, 1945, eight such libraries had been started, and by 1948, 47 libraries were receiving aid under the scheme, which is worked through the Municipalities and Road Boards. In each case the local authority makes its own arrangements for the supervision and lending of books.

In 1945 an Archives Branch was established at the Public Library, through which historical material can be collected, indexed and made available to the public. Also, the collection of the Western Australian Historical Society is being housed at the Public Library.

An Adult Education Library, in existence for the past eleven years, provides for readers in metropolitan and country areas.

(viii) *Tasmania.* Library service in Tasmania has expanded rapidly during the past few years. Under the Libraries Act, 1943, the Tasmanian Library Board was constituted, and the State Library of Tasmania was established on 1st January, 1944. The Board, in

addition to administering the State Library head-quarters in Hobart, is responsible for the extension of library services throughout the State and for the control of State aid. Municipalities adopting the Act spend the proceeds of local rates on library premises, salaries and maintenance, and books for permanent retention. State aid is provided in the form of books of a value equal to the amount collected in rates, which are exchanged at intervals. In Launceston State aid is given in cash. The Launceston City Council now contributes approximately £2,100 per annum, and a like amount is received in State aid. Since the library became free under the Act, membership has increased from 1,000 to over 13,000, and the newly established children's library now has about 3,400 borrowers.

Of the 49 municipalities in the State, 33 have adopted the Act and six libraries have been established with the support of the Hydro-Electric Commission. This means that municipalities representing 80 per cent. of the population now have free libraries. Expenditure on library service has risen to 2s. 4d. per head of the population.

The State Library provides lending and reference services for the people of Hobart and operates a reference service for people throughout the State. It conducts regular showings of documentary films, and has assumed responsibility for the extension of these programmes in the State. As a result of a recent gift from the British Council, the library has a collection of musical recordings and scores which are available for loan to the public. The Library also arranges on its own behalf, or in association with other bodies, winter recitals of recorded music, summer schools, lectures, library weeks in country centres, puppetry demonstrations, etc.

The Parliamentary Library works in close collaboration with the State Library, which provides a reference officer to serve members during session, and undertakes to catalogue all new books added to the library as well as supplying recreational reading. Mr. K. Binns, former Librarian of the Commonwealth National Library, inspected the Library in June, 1948, and has presented a comprehensive report to Parliament.

3. University Libraries.—The libraries of the Australian Universities perform two important functions in Australian life and development; they provide material not only for the education of graduates and undergraduates, but for scholars, research workers and practical investigators all over the continent, since no genuine student is refused access to them. Much of the material they contain is not available elsewhere, for although in most cases smaller, they are in many directions more highly specialized than the public libraries, whose resources they are thus able to supplement. They lend to one another and to State and private institutions as well as to individual investigators, and they both lend to and borrow from the public and scientific libraries. Each of them is governed by a librarian, who is responsible as a rule to an executive sub-committee and a committee which is practically co-extensive with the professional staff. In size the Library of the University of Sydney is the third in Australia, and the Libraries of the Universities of Adelaide and Melbourne are respectively seventh and eighth. The following table shows the sizes and rates of growth and expenditure of the Australian university libraries; it is impossible to give borrowing statistics, as they differ too widely to be comparable without much explanation.

UNIVERSITY LIBRARIES, 1948.

University.	Volumes.	Accessions during year.	Expenditure.
	No.	No.	£
Sydney	305,340	6,367	17,045
Melbourne	149,283	4,805	14,713
Queensland	95,000	4,558	7,886
Adelaide	154,800	4,000	9,914
Western Australia	85,030	4,641	5,530
Tasmania	67,896	3,637	6,587
New England University College	10,407	1,361	2,405
Canberra University College	5,587	764	1,193

The first books were bought for the Library of the University of Sydney as early as 1851; only since 1910, however, has it possessed a building of its own. It is named after its principal benefactor, Thomas Fisher, who bequeathed to it in 1885 the sum of £30,000. It contains an up-to-date bookstack of glass and steel and a fine reading room in which since the beginning of 1941 about 18,000 volumes of the collection have been made available on open access shelves. In addition, members of the teaching staff and certain classes of undergraduates are admitted to the bookstacks; all readers are encouraged to borrow freely. The Library possesses a large number of periodicals, especially scientific, valuable collections of seventeenth-century pamphlets and Elizabethan translations from the classics, and an extensive collection of Australian literature. Besides medical and law branches, there are a number of departmental libraries.

Early in 1854 the Council of the University of Melbourne made its first allocation for books, but the Library was housed in temporary and unsatisfactory quarters for a number of years, and consequently growth was slow and complaints were frequent. In recent years the university authorities have treated the Library generously, and there have been some welcome benefactions, but accommodation is insufficient and a new library building is one of the most pressing needs of the University. The W. L. Baillieu Trust has given £36,000 as the first instalment of a £100,000 gift with which a new library will be built. All the books are accessible on open shelves and though the Library is intended primarily for reference purposes, borrowing, except of text-books and certain valuable volumes, is made as easy as possible. The Library is administered from the centrally situated general library; there is a large medical branch library specially rich in periodicals, and smaller branch libraries are accommodated in some of the science departments.

The Library of the University of Queensland began 34 years ago with £3,000 worth of books, £2,000 having been raised by public subscription and £1,000 granted by the Government. At present it shares a building with a science department. The library contains 95,000 volumes including the numbers in the several departmental libraries.

The Adelaide University Library bears the title of its original benefactor, Robert Barr Smith, who, with members of this family in and after 1892, gave the University about £50,000 for library purposes. Some 20,000 volumes are shelved in the reading room and are available to the ordinary student. Up-to-date steel bookstacks provide accommodation for about 100,000 volumes, and additions now planned will be capable of housing a further 500,000. Borrowing facilities are available to all matriculated students, to country students and to graduates. There are medical and law departmental libraries. The medical library has on permanent loan the collection of the Institute of Medical and Veterinary Science, and also incorporates the library of the British Medical Association (South Australian Branch).

In the University of Western Australia the first permanent library staff was not appointed until 1927. Provision of permanent library accommodation was not possible when the university moved to its present site, and space and facilities have consequently been inadequate. Extensions to the temporary quarters were made in 1946. The whole collection, consisting of about 85,000 volumes, is accessible on open shelves, and there are several departmental libraries. A special feature is the use made of student co-operation.

The Library of the University of Tasmania was founded in 1893, but for many years it comprised little more than a collection of text-books. In 1913 a substantial increase of funds was allotted and important gifts were received. In 1919 it was organized for the first time in accordance with modern library practice. A full-time librarian was appointed for the first time at the end of 1945, and the staff has increased from two to ten. Although accommodation for both books and readers has been more than doubled, space is still an acute problem and plans are being prepared for a new building. The grant from University funds for books and periodicals has been doubled, and an additional special grant is being provided by the Government to fill some of the more serious deficiencies in the collection. The Library is now providing a cataloguing service for the library of the Royal Society of Tasmania.

The New England University College Library was founded in 1938, and bears the name of its first benefactor, Sir William Dixon. At the end of 1948 it contained some 16,500 volumes mainly on open shelves.

The Canberra University College Library was established in 1938. At the end of 1948 it contained 5,587 volumes, which are on open shelves; reference books may be borrowed.

The announcement during 1947 that a National University Library is to be established in Canberra heralds a further expansion in library activity.

4. *Children's Libraries and School Libraries.*—(i) *General.* A survey conducted early in 1946 revealed that only a small percentage of children was being catered for by adequate library service. The effective use made of the few existing children's libraries is proof that the growing interest in this branch of library work will be well rewarded.

During November, 1945, a Children's Book Week was held for the first time in several States, to stimulate interest in children's reading.

(ii) *New South Wales.* Children's libraries are being developed as departments of municipal and shire libraries. Three formerly independent children's libraries at Mosman, Wollongong and Moss Vale are now departments of municipal and shire libraries and have greatly increased budgets.

From 1937-38 school library work has been fostered by the State Library in co-operation with the Education Department. A "Model School Library" was established, and vacation classes for teacher librarians are held. To date these classes have been attended by 495 teachers. Twenty-eight schools are receiving grants of books under the Department of Education School Library Project and since 1945, 97 other schools have been assisted by officers of the School Library Service in purchasing books.

(iii) *Victoria.* Since 1943-44 children's libraries have shared a grant of £500 between them, the number participating in 1945 being 27.

The Education Department has an annual grant which it distributes among approximately 1,000 schools. In addition, the Government subsidizes the purchase of approved books for school libraries on a £1 for £1 basis, with a maximum of £30. During 1947-48 the total government contribution was £8,206. A State Schools' Library Advisory Committee has been set up by the Education Department to advise on all matters pertaining to school libraries, and six teachers underwent a full course of library training during 1947 in order to be able to direct and supervise library service within the Department. A Libraries Service Officer visits schools and group conferences of teachers to advise and assist in matters relating to school libraries.

In several country districts circulating group libraries have been established, financed by school committees and municipal authorities. Boxes of books are despatched to each school in the group, usually at the commencement of the school term. Financed by a bequest by the late William Gillies, a scheme of circulating libraries for schools, particularly remote ones, has been operating for some years. In 1948, 25 groups, each comprising three schools, were operating under this scheme. During 1947-48, £750 was paid in subsidies to these groups.

The Kirby survey of secondary schools, 1945, revealed that only 5 per cent. have satisfactory libraries, and 50 per cent. are without libraries or merely possess collections of books. Most of the larger government and private schools are making an effort to establish better libraries.

(iv) *Queensland.* The purchase of books in State school libraries in Queensland is financed by school committees and parents' associations, with a subsidy from the Department of Public Instruction on a £1 for £1 basis. The subsidy was suspended from 1931 to 1943.

In 1937 a system of Circulating Supplementary Readers was commenced. Books are graded for age levels and are moved from school to school, sufficient copies of each book for a whole class being sent, and reading being done in school. There are 96,000 such books now in use, the distribution at present being confined to primary schools.

(v) *South Australia.* The Children's Library houses 5,000 volumes. Its work lies largely with classes from metropolitan schools which come to study subjects, for simple library instruction, or epidiascope talks. Week-ends and school holidays bring many readers. A lending service has not yet been established. (*See also Country Lending Service*, page 264.)

The government recently recognized the importance of children's reading by appointing an organizer of school libraries.

(vi) *Western Australia.* A travelling library service to country schools has been operated from the Public Library for some years. The Charles Hadley Library since 1938 has also provided boxes of books to one- and two-teacher schools. Financed by commission for the teachers' services by the Commonwealth Bank, together with an annual grant of £250 by the Government, some 180 boxes are kept in circulation.

A new departure in 1948 was the establishment of fixed reference libraries in all small schools, for which a government grant of £4,000 was made. For the larger State schools a similar grant on a £1 for £1 subsidy basis has been provided. These grants are to be continued each year.

Children in isolated areas are catered for by books sent out by the State Correspondence Schools Library. The children are kept in touch with the Library by means of radio talks and appropriate leaflets issued from time to time. There is as yet no general scheme to serve children in the metropolitan area.

The Federation of Police and Citizens Boys' Clubs of Western Australia aims at establishing a system of circulating boxes of books at an estimated cost of £10,000 of which £2,000 has already been received; 2,400 books have been purchased and are in circulation to 32 centres, and there is a sum of £500 in hand.

The Western Australian Children's Book Council was formed in 1947 to sponsor Book Week and to interest people in juvenile books. The scope of its activities was widened to include also assistance in establishing children's libraries in the State.

(vii) *Tasmania.* Early in 1945 an appeal fund was opened for the establishment of Lady Clark Memorial Children's Libraries. The fund closed on 30th June, 1947, with an approximate total of £17,000. With its head-quarters at the State Library, in Hobart, it aims to serve all children in Tasmania with books. It works through the municipal authorities: at 30th June, 1948, children's libraries had been established in 27 municipalities, including Hobart, and four special Hydro-electric districts, children's books being provided on a population basis.

Practically all State secondary schools in Tasmania have libraries, with full-time librarians in four of them, and part-time librarians in the others. The Friends' School, Hobart, has a good library with a full-time trained librarian in charge. This library and that of the Hobart High School are among the foremost of their kind in Australia.

A Schools' Library Service assists with loans of curriculum books, 30 at a time, and provides advice and guidance in the use of books. The majority of primary schools have libraries; most area schools, in particular, have good ones.

The Education Department sends, each year, selected students or teachers to the Library School in Sydney.

5. Industrial Libraries. Before the war industrial libraries were practically unknown in Australia, but during recent years many manufacturing firms have found it necessary to establish libraries to keep their scientific staffs informed of the latest technical advances. At present there are seventeen libraries staffed by trained librarians attached to commercial organizations in Sydney, and 38 libraries in government and semi-government departments and scientific institutions. There are some 30 industrial libraries in Victoria, and several in other States.

6. Microfilms. Several libraries in Australia have adopted the practice of providing microfilm or photostat copies of material required for borrowing. In addition to the great convenience of this method of borrowing, it has the advantage of lessening the possibility of the loss or deterioration of valuable library material. A small charge is usually made for the service. The following is a list of libraries which undertake this service. The letter "P" signifies photostat supplied and "M" microfilm supplied:—
Australian Capital Territory—Australian War Memorial (P). Commonwealth National

Library (PM); New South Wales—Metropolitan Water Sewerage and Drainage Board (P), Public Library of New South Wales (M), Standards Association of Australia (P), School of Public Health and Tropical Medicine (M), Fisher Library, University of Sydney (PM); Victoria—Commonwealth Serum Laboratories (P), Technical Information Section, Munitions Supply Laboratories (PM), Public Library of Victoria (M), Standards Association of Australia (Melbourne Branch) (P), University of Melbourne (PM); Queensland—Public Library (P), Parliamentary Library (P), Queensland University (P); South Australia—Public Library of South Australia (PM), University of Adelaide (PM), Waite Agricultural Research Institute (P); and Tasmania—University of Tasmania (PM.)

§ 13. Public Museums.

The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing fine collections of the usual objects to be met with in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building to 30th June, 1948, was £86,560. The number of visitors to the institution during 1947-48 was 197,807, and the average attendance on week-days 434, and on Sundays 1,187. The expenditure for 1947-48 amounted to £25,330. A valuable library containing 32,404 volumes is attached to the Museum. Courses of evening popular lectures are delivered and lecturers also visit distant suburbs and country districts, while afternoon lectures for school children are provided. Nature talks are also broadcast by radio. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids to country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, and the Museum of Normal and Morbid Anatomy, connected with the University, and the National Herbarium and Botanical Museum, at the Sydney Botanic Gardens, are all accessible to the public. There is a Museum of Technology and Applied Science in Sydney with branches in six country centres. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus, and the gums, kinos, tanning materials, and other economic products of native vegetation generally.

The National Museum at Melbourne, devoted to natural history, geology, and ethnology, is located in the eastern section of the Public Library Building. The National Art Gallery is situated in the same building. The Museum of Applied Science also housed under the same roof, contained at 30th June, 1948, 22,870 exhibits which cover applied and economic aspects of all branches of science. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the Schools of Mines in the chief mining districts.

The Queensland Museum founded in 1855 comprises exhibited and reference collections of zoology, geology and ethnology. It is entirely maintained by the State Government and cost of the building was £29,673. The collections are principally but not exclusively, Australian; there is, for example, the excellent series of ethnological material formed by Sir William McGregor in New Guinea. The publication is *Memoirs of the Queensland Museum* which was preceded by the *Annals of the Queensland Museum*. The library is extensive and valuable, and of great assistance to research workers in the State.

The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

Under the Public Library Act of 1884 the South Australian Institute ceased to exist, and the books contained therein were divided amongst the Museum, Public Library, Art Gallery and the Adelaide Circulating Library. The South Australian Museum has considerable collections of most branches of natural history and was attended by 110,000 visitors in 1947-48. Cost of construction of the Museum building was returned as £65,000. In 1947-48 expenditure was £14,015.

The latest available returns show that the Western Australian Museum and Art Gallery contains altogether 177,000 specimens, of an estimated value of £100,000. The Museum, Art Gallery, and Library are housed in one building, and the visitors to the combined institutions during the year reached 64,000. At the 30th June, 1948, the structure was valued at £65,500.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral, and miscellaneous products. The Museums received aid from the Government during 1947 to the extent of £8,156. The cost of construction in each case is included in that of Art Galleries given below.

§ 14. Public Art Galleries.

The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £96,000. At the end of 1947 its contents, which are valued at £239,000, comprised 1,001 oil paintings, 633 water colours, 1,713 black and white, 228 statuary and bronzes, and 1,050 ceramics, works in metal and miscellaneous. During the year the average attendance on week-days was 395, and on Sundays 1,232. Since the year 1895 loan collections of pictures have been regularly forwarded for exhibition in important country towns.

The National Gallery at Melbourne at 30th June, 1948 contained 2,120 oil paintings, 7,746 objects of statuary, bronzes, ceramics, etc., and 21,671 water colour drawings, engravings, and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £439,000. Cost of purchases during 1947-48 was £70,612 and the total to that date amounted to £692,812. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. There are provincial art galleries at Ballarat, Bendigo, Geelong, Castlemaine and Warrnambool and periodically pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, situated in the Executive Buildings, Brisbane, was founded in 1895, and contains a small, but well chosen collection of pictures. At the end of 1947 there were on view 253 oil paintings, 121 water colours, 235 black and white, and 43 pieces of statuary, together with various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £24,500. Visitors during the year averaged 925 on Sundays and 214 on week-days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the gallery rapidly to outgrow the accommodation provided for it in 1880 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir Thomas Elder, the Government erected the present building which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and valuable prints and £3,000 in 1907 from Mr. David Murray. In 1935 Mr. Alex Melrose gave £10,000 for the extension of the building. At the 30th June, 1948, there were in the Gallery 1,379 paintings in oil and water colour, 462 drawings and black and white, and 66 items of statuary, the contents being valued at £84,300. The cost of construction of the Art Gallery amounted to £48,000.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and the Public Library, Museum, and Art Gallery are all situated in the one structure. The collection comprises 202 oil paintings, 104 water colours, 385 black and white, 276 statuary, and 1,200 ceramic and other art objects, the whole being valued at £31,000. Cost of construction of the buildings amounted to £10,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. At December, 1947, the contents consisted of 82 oil paintings, 46 water colours, 6 black and white, 3 statuary, and 12 etchings, engravings, etc. The cost of construction of the building was £4,500.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. At December, 1947 there were on view 42 oil paintings, 35 water colours, 8 black and white, 8 statuary and 47 engravings and miscellaneous exhibits.

§ 15. Scientific Societies.

1. **Royal Societies.**—In previous issues of the Official Year Book an outline was given of the origin and progress of the Royal Society in each State (*see* No. 22, pp. 454–5). The accompanying table contains the latest available statistical information regarding these institutions, the head-quarters of which are in the capital cities.

ROYAL SOCIETIES : PARTICULARS, 1948.(a)

Particulars.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
Year of foundation ..	1866	1854	1884	1834	1913	1843
Number of members ..	354	244	238	160	212	395
Vols. of transactions issued ..	81	92	59	72	33	82
Number of books in library	40,393	18,500	4,000	10,000	6,500	23,518
Societies on exchange list ..	466	350	240	200	100	297
Income .. £	2,028	713	365	761	468	723
Expenditure .. £	1,800	700	340	766	350	707

(a) The Royal Society of Australia, with head-quarters at Canberra, was founded on 25th July, 1930, and received permission to use its title on 14th January, 1931. The members numbered 55 in 1948. Income and expenditure for the year amounted to £36 and £13 respectively.

2. **The Australian and New Zealand Association for the Advancement of Science.**—This Association was founded in 1887. Its head-quarters are at Science House, Gloucester-street, Sydney, and meetings are usually held biennially within the various States and in the Dominion of New Zealand. The last meeting was held in Hobart in January, 1949.

3. **Other Scientific Societies.**—The Linnean Society of New South Wales, with head-quarters in Sydney, was founded in 1874. The soundness of its present position is due to the benefactions of Sir William Macleay, who during his lifetime and by his will endowed the society to the amount of £67,000, which has been increased by judicious investment to approximately £100,000. The Society maintains a research bacteriologist and offers annually, to graduates of the University of Sydney, four research fellowships in various branches of natural history. Four fellowships were awarded in 1949. The library comprises some 18,000 volumes, valued at about £9,000. Seventy-three volumes of proceedings have been issued, and the Society exchanges with about 250 kindred institutions and Universities throughout the world. The membership at the end of 1948 was 220.

The British Astronomical Society has a branch in Sydney, and in each of the States the British Medical Association has a branch.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

§ 16. State Expenditure on Education, Science and Art.

The expenditure in each State on education, science and art during the years 1946-47 and 1947-48 is shown in the following table. Owing to the details not being available in all States, the figures exclude officers' pensions and superannuation, pay-roll tax, and interest and sinking fund on capital expended on buildings. The cost of the medical inspection of school children is also excluded, as this service is more appropriately classified under Public Health, etc. :—

STATE EXPENDITURE ON EDUCATION, SCIENCE AND ART.

(£)

State.	Expenditure from—				Receipts.	Net Expenditure.
	Revenue.	Loan.	Other Funds.	Total.		
1946-47.						
New South Wales	8,768,883	284,539	..	9,053,422	287,980	8,765,442
Victoria.. ..	5,230,389	591,686	5,369	5,827,444	(a) 81,745	5,745,699
Queensland ..	2,816,679	206,198	13,616	3,036,493	49,607	2,986,886
South Australia ..	1,828,457	122,597	..	1,951,054	54,221	1,896,833
Western Australia	1,388,061	88,551	21,000	1,498,513	97,000	1,400,819
Tasmania ..	797,916	81,513	..	879,429	6,476	872,953
Total ..	20,831,285	1,375,085	39,985	22,246,355	577,723	21,668,632
1947-48.						
New South Wales	9,830,307	555,651	..	10,385,958	508,774	9,877,184
Victoria.. ..	6,226,272	592,359	6,002	6,824,722	(a) 196,994	6,627,729
Queensland ..	3,151,480	238,734	56,538	3,446,761	62,428	3,384,333
South Australia ..	2,154,713	276,755	..	2,431,468	135,625	2,295,843
Western Australia	1,815,320	146,034	72,199	2,063,553	126,707	1,936,846
Tasmania ..	940,172	100,038	..	1,040,210	3,722	1,036,488
Total ..	24,148,273	1,909,571	134,829	26,192,673	1,034,250	25,158,423

(a) In addition, fees in respect of technical education amounting to £177,626 in 1946-47 and £181,217 in 1947-48 were received and spent by the School Councils.

CHAPTER VII.

PUBLIC JUSTICE.

§ 1. Lower (Magistrates') Courts.

1. **General.**—In considering the criminal returns of the various States, due allowance must be made for certain factors, such as the relative powers of the higher and lower courts. In the case of lower courts, the actual number of laws in each State whose breach renders a person liable to fine or imprisonment must be taken into account. Again, the attitude of the magistracy and police towards certain classes of offences is a factor, for in the case of liquor laws or laws connected with vagrancy or gaming, the views of the magistrates, and instructions issued to the police, may be responsible for considerable variations in the numbers. The strength and distribution of the police forces, and the age-constitution and distribution of the population of the States, also influence the results. Due weight should be given also to the prevalence of undetected crime, but information on this point is not available for all States. It may be mentioned that each State has its own separate judicial system, the Commonwealth jurisdiction being confined to the High Court of Australia (largely a Court of Appeal intermediate to the Privy Council although it has also original jurisdiction), the Commonwealth Court of Conciliation and Arbitration and the Federal Court of Bankruptcy. Full particulars regarding the judicial power of the Commonwealth will be found in Chapter III. of the Commonwealth Constitution which appears on page 18 of this issue.

2. **Powers of the Magistrates.**—(i) *New South Wales.* There is no general limit to the powers of the magistrates in regard to offences punished summarily, their authority depending in each case on the statute which creates the offence and gives them jurisdiction. Except in the case of a very few statutes, and excluding cumulative sentences, the power of sentence is limited to six months. Imprisonment in default of fine is regulated by a scale limiting the maximum period according to the sum ordered to be paid, but in no case exceeding twelve months. Actions for debt and damage within certain limits also come within magisterial jurisdiction. In cases of debt, liquidated or unliquidated and damage, the amount recoverable is not exceeding £50 before a court constituted by a stipendiary magistrate at certain authorized places, and not exceeding £30 at any other place before a court constituted by a stipendiary magistrate or two or more justices of the peace. The amount in actions of damage before two or more Justices of the Peace is limited to £10, but may extend to £30 by consent of defendant. Outside the Metropolitan Area of Sydney and certain other prescribed districts one justice of the peace may hear cases of debt, liquidated or unliquidated, or damage up to £5 and to £30 by consent of parties.

(ii) *Victoria.*—The civil jurisdiction of magistrates is restricted to what may be designated ordinary debts, damages for assault, restitution of goods, etc., where the amount in dispute does not exceed £50, and to actions arising out of torts or contracts. No definite limit is fixed to the powers of the magistrates on the criminal side, and for some offences sentences up to two years may be imposed. The proportion of long sentences is, however, comparatively small.

(iii) *Queensland.* Generally speaking, the maximum term of imprisonment which justices can inflict is six months, but in certain exceptional cases such as offences against sections 233, 344, and 445 of the Criminal Code (betting houses, aggravated assaults, and illegally using animals) sentences of twelve months may be imposed.

There is provision for applying cumulative sentences, but in practice, in general, not more than one sentence is made cumulative on a previous sentence.

Magistrates have no power to deal with habitual offenders, but there are such powers vested in the Supreme Court.

(iv) *South Australia.* In South Australia the power of special magistrates to impose fine and imprisonment is defined by the special act creating the offence and conferring jurisdiction. In the case of common law misdemeanours triable summarily, a maximum penalty of £100 fine or 2 years' imprisonment is fixed by the Justices Act 1921-1947. Magistrates also have power to hear certain civil actions in which the amount claimed is less than £750.

(v) *Western Australia.* The powers of magistrates and justices in regard to offences triable summarily are governed by the act creating the offence and giving them jurisdiction. Imprisonment in default of payment of a fine is regulated by a scale limiting the period according to the amount of the fine but not to exceed six months.

The civil jurisdiction of magistrates and courts is restricted in general to £250 but disputed actions, the subject matter of which exceeds £100, must be tried by a judge. By consent of the parties, any action that might be brought in the Supreme Court may be dealt with in a Local Court. Justices may act in the case of illness or absence of the magistrate.

Magistrates are coroners and justices may be appointed as acting coroners.

Magistrates have appellate jurisdiction under some statutes and in country districts act as Chairman of the Courts of Session. They may be appointed as Commissioners of the Supreme Court.

On the goldfields, the magistrate is also the warden.

(vi) *Tasmania.* Magistrates may hear and determine in Courts of Petty Sessions all offences other than those punishable on indictment. Stealing and analogous crimes where the property involved does not exceed £10 in value may be dealt with by magistrates unless the defendant objects.

No general limit is fixed in respect of sentences, the statute creating the offence almost invariably laying down the penalty. Where this is not the case, the Contravention of Statutes Act 1889, provides that a fine of £50 may be imposed. Generally speaking, sentences which justices can inflict are limited to six months, although in several cases sentences of up to two years may be imposed. The aggregate term of cumulative sentences cannot exceed two years.

The civil jurisdiction of magistrates is divided into two categories. A Commissioner of the Court of Requests, who must be a legal practitioner, and is invariably a police magistrate, may hear actions for the recovery of debts and damages not exceeding £100. The jurisdiction of these courts may be increased by proclamation to £250, and this has been done in five instances. Courts of General Sessions, constituted by at least two justices, exercise similar powers, but the jurisdiction cannot exceed £50. Only one court has the maximum jurisdiction, the other being limited to £30.

3. *Cases Tried at Magistrates' Courts.*—The total number of arrest and summons cases tried at Magistrates' Courts in each State is given below for 1939 and for the years 1944 to 1948:—

CASES TRIED AT MAGISTRATES' COURTS.

State or Territory.	1939.	1944.	1945.	1946.	1947.	1948.
New South Wales ..	144,848	126,501	141,079	173,311	180,835	198,456
Victoria ..	82,858	64,889	60,741	64,487	73,990	76,516
Queensland(a) ..	32,501	24,040	27,838	33,096	34,664	36,149
South Australia ..	22,776	(a)22,646	(a)22,837	(a)27,067	(a)27,005	(a)25,376
Western Australia ..	24,111	21,682	19,716	24,831	22,893	26,257
Tasmania ..	9,498	6,318	6,422	9,390	9,024	9,060
Northern Territory(a)	1,494	244	349	786	1,102	1,598
Aust. Cap. Territory..	284	409	354	633	893	777
Total ..	318,370	266,729	279,339	333,601	350,406	374,189

(a) Year ended 30th June following.

Investigation of the returns shows that considerable variations in the figures for single States are occasioned by breaches of new Acts, or the more stringent enforcement of the provisions of existing Acts. Any deductions drawn from the total returns as to the increase or decrease of criminality should, therefore, be based upon a careful analysis of the detailed list of offences.

4. **Convictions at Magistrates' Courts.**—The figures given in the previous table include, of course, a number of people who were charged without sufficient reasons, and, statistically, are not of general importance. A classification of convictions of persons who appeared before the lower courts in each State during 1947 and 1948 is given in the following table :—

CONVICTIONS AT MAGISTRATES' COURTS.

Class of Offence.	N.S.W.	Vic.	Qld.(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
1947.									
Against the Person ..	2,668	944	320	309	298	149	25	16	4,729
Against Property ..	11,731	4,071	1,921	1,268	2,143	769	68	123	22,094
Forgery and Offences against the Currency..	227	13	..	2	..	19	6	..	267
Against Good Order ..	90,007	21,050	19,541	6,914	5,696	1,145	608	530	145,491
Other Miscellaneous ..	60,839	40,008	9,533	15,671	12,958	5,230	351	60	144,650
Total ..	165,472	66,086	31,315	24,164	21,095	7,312	1,058	729	317,231

1948.									
Against the Person ..	2,777	898	350	248	308	175	62	41	4,859
Against Property ..	10,427	4,066	2,084	1,188	2,266	629	129	87	20,876
Forgery and Offences against the Currency..	104	..	..	4	4	1	1	1	117
Against Good Order ..	105,606	22,747	23,007	7,276	6,048	1,227	1,122	559	167,592
Other Miscellaneous ..	64,453	40,532	8,028	14,118	15,734	5,669	200	26	148,760
Total ..	183,367	68,243	33,469	22,834	24,360	7,701	1,516	714	342,204

(a) Year ended 30th June following.

The following table shows the number of convictions in 1939 and in each year from 1944 to 1948 :—

CONVICTIONS AT MAGISTRATES' COURTS.

State or Territory.	1939.	1944.	1945.	1946.	1947.	1948.
New South Wales ..	126,353	111,008	125,982	157,108	165,472	183,367
Victoria ..	72,186	56,939	53,101	56,628	66,086	68,243
Queensland(a) ..	28,920	20,926	25,417	30,623	31,315	33,469
South Australia ..	20,429	(a)20,554	(a)20,585	(a)24,491	(a)24,164	(a)22,834
Western Australia ..	22,539	20,302	18,263	23,042	21,095	24,360
Tasmania ..	8,722	5,229	5,048	7,529	7,312	7,701
Northern Territory(a)	1,394	194	244	738	1,058	1,516
Aust. Cap. Territory..	260	286	308	440	729	714
Total ..	280,803	235,438	248,948	300,599	317,231	342,204

(a) Year ended 30th June following.

5. *Convictions for Serious Crime at Magistrates' Courts.*—(i) *General.* While the figures given in the preceding table refer to the entire body of convictions, the fact must not be overlooked that they include a large proportion of offences of a technical nature, many of them unwittingly committed, against various Acts of Parliament. Cases of drunkenness and minor breaches of good order, which, if they can be said to come within the category of crime at all, at least do so in a very different sense from some other offences, also help to swell the list. The following table has therefore been prepared for the purpose of showing the convictions at magistrates' courts for what may be regarded as the more serious offences, i.e., against the person and property, either separately or conjointly, and forgery and offences against the currency. Owing to the smallness of the population, the rates for the Northern and the Australian Capital Territories are subject to considerable variation.

(ii) *Number and Rates, Years 1939, 1944 to 1948.* The following table shows the number and rates of convictions for serious crime at magistrates' courts for the years 1939, 1944 to 1948 :—

CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS.

State or Territory.	1939.	1944.	1945.	1946.	1947.	1948.
NUMBER.						
New South Wales ..	12,724	15,038	15,768	14,870	14,626	13,308
Victoria ..	5,727	6,186	5,211	5,196	5,028	4,064
Queensland(a) ..	2,402	3,509	3,090	2,473	2,241	2,434
South Australia ..	1,224	(a) 1,465	(a) 1,435	(a) 1,571	(a) 1,579	(a) 1,440
Western Australia ..	2,614	2,841	2,401	2,767	2,441	2,578
Tasmania ..	959	655	707	982	937	805
Northern Territory(a)	44	40	23	87	99	194
Aust. Cap. Territory..	50	77	115	69	139	120
Total ..	25,753	29,811	28,750	28,015	27,090	25,852

PER 10,000 OF THE MEAN POPULATION.

New South Wales ..	46.26	52.10	54.04	50.48	49.00	43.92
Victoria ..	30.48	31.08	25.96	25.65	24.49	23.75
Queensland(a) ..	23.52	32.84	28.51	22.54	20.14	21.45
South Australia ..	20.50	(a) 23.51	(a) 22.74	(a) 24.53	(a) 24.22	(a) 21.65
Western Australia ..	55.63	58.99	49.23	56.13	48.52	50.07
Tasmania ..	40.15	26.67	28.44	38.94	36.35	30.42
Northern Territory(a)	60.58	38.21	21.84	81.53	87.53	151.08
Aust. Cap. Territory..	47.18	54.23	76.61	43.44	82.23	70.99
Total ..	36.91	40.72	38.84	37.45	35.68	33.44

(a) Year ended 30th June following.

(iii) *Rate of Convictions, 1881 to 1948.* Statistics of convictions reveal a consistent increase in the rate of serious crime from 1925 to 1931, when 37.1 convictions per 10,000 of the population were recorded. Following this comparatively high figure the rate declined to 32.4 in 1933 but increased considerably to 36.9 in 1939. In 1941 the rate declined to 33.6 but rose in the next two years to 43.2, the highest recorded since 1891,

when the average number of convictions was 44.8. The rate declined in 1944 to 40.7, in 1947 to 35.7 and in 1948 to 33.4. The rate of convictions over a series of years is shown below; only the more serious offences particularized in the preceding sub-section have been taken into consideration.

RATE OF CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS :
AUSTRALIA.

Year	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1948.
Convictions per 10,000 persons	69.3	44.8	29.1	24.6	29.2	37.1	33.6	33.4

6. *Committals to Superior Courts.*—(i) *General.* In a previous paragraph it has been pointed out that comparisons of criminality based on a consideration of the total returns from magistrates' courts are somewhat inadequate, inasmuch as the figures include numbers of cases which are merely technical breaches of laws having in some instances a purely local significance. The committals to higher courts give a better basis of comparison, although even in this connexion allowances must be made for the want of uniformity in jurisdiction. A classification of the offences for which persons appearing in the lower courts were committed to higher courts in each State and Territory for the years 1947 and 1948 is shown in the following tables :—

COMMITTALS TO SUPERIOR COURTS.

Class of Offence.	N.S.W.	Vic.	Qld.(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust
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1947.

Against the Person ..	704	303	184	176	55	36	6	10	1,474
Against Property ..	2,335	1,303	234	173	108	54	5	12	4,224
Forgery and Offences against the Currency ..	47	60	1	12	1	4	..	..	125
Against Good Order ..	20	16	1	34	3	6	..	..	80
Other Miscellaneous ..	42	101	13	10	5	..	..	..	171
Total	3,148	1,783	433	405	172	100	11	22	6,074

1948.

Against the Person ..	772	310	148	158	55	25	13	4	1,485
Against Property ..	2,179	1,560	179	119	91	40	8	5	4,181
Forgery and Offences against the Currency ..	86	50	1	22	..	1	..	..	160
Against Good Order ..	18	10	..	15	5	..	2	..	50
Other Miscellaneous ..	58	66	2	12	9	6	..	..	153
Total	3,113	1,996	330	326	160	72	23	9	6,029

(a) Year ended 30th June following.

The following table shows the number of committals in 1939 and in each year from 1944 to 1948, with the rate of such committals per 10,000 of the mean population :—

COMMITTALS TO SUPERIOR COURTS.

State or Territory.	1939.	1944.	1945.	1946.	1947.	1948.
NUMBER.						
New South Wales ..	2,288	2,631	3,061	3,566	3,148	3,113
Victoria ..	1,777	1,617	1,595	1,532	1,783	1,996
Queensland(a) ..	359	359	369	400	433	330
South Australia ..	259	(a) 273	(a) 352	(a) 344	(a) 405	(a) 326
Western Australia ..	129	143	193	150	172	160
Tasmania ..	82	58	113	118	100	72
Northern Territory(a) ..	12	15	9	6	11	23
Australian Capital Territory	18	1	6	7	22	9
Total	4,924	5,097	5,698	6,123	6,074	6,029

PER 10,000 OF THE MEAN POPULATION.

New South Wales ..	8.3	9.1	10.5	12.1	10.6	10.3
Victoria ..	9.5	8.1	8.0	7.6	8.7	9.6
Queensland(a) ..	3.5	3.4	3.4	3.7	3.9	2.9
South Australia ..	4.3	(a) 4.4	(a) 5.6	(a) 5.4	(a) 6.2	(a) 4.9
Western Australia ..	2.8	3.0	4.0	3.0	3.4	3.1
Tasmania ..	3.4	2.4	4.6	4.7	3.9	2.7
Northern Territory(a) ..	16.5	14.3	8.5	5.6	9.7	17.9
Australian Capital Territory	14.4	0.7	4.0	4.4	13.0	5.0
Total	7.1	7.0	7.7	8.2	8.0	7.8

(a) Year ended 30th June following.

(ii) *Rate of Committals since 1881.* With occasional variations the rate of committals for serious crime has remained fairly stable during recent years, and, if the comparison be carried back further, the movement in the rate has undergone very little change during the present century. The rate at intervals since 1881 is as follows :—

RATE OF COMMITTALS TO SUPERIOR COURTS : AUSTRALIA.

Year	1881.	1891.	1901.	1911.	1921.	1931.	1941.	1948.
Committals per 10,000 persons	12	11	8	6	7	8	5	8

7. **Drunkenness.**—(i) *Cases and Convictions.* The number of arrest and summons cases of drunkenness and the convictions recorded during the year 1939 and for the years 1945 to 1948 are given in the following table :—

DRUNKENNESS : CASES AND CONVICTIONS.

State or Territory.	1939.		1945.		1946.		1947.		1948.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
New South Wales	32,472	32,405	43,582	43,561	62,211	62,120	67,524	67,324	82,900	82,625
Victoria ..	11,609	11,421	10,534	10,443	11,704	11,601	14,952	14,850	16,600	16,416
Queensland (a) ..	11,202	11,118	11,675	11,617	16,154	16,042	17,419	17,258	21,242	21,124
South Australia ..	2,607	2,597	3,515	3,507	4,311	4,296	4,932	4,908	5,482	5,458
Western Australia	2,681	2,658	4,087	4,039	4,094	4,052	4,292	4,250	4,437	4,367
Tasmania ..	411	407	232	223	464	450	445	436	519	501
Northern Terr. (a)	686	677	185	139	119	113	351	348	804	798
Aust. Cap. Terr.	114	114	37	37	139	136	279	279	427	414
Total ..	61,782	61,397	73,847	73,566	99,196	98,810	110,194	109,653	132,411	131,703

(a) Year ended 30th June following.

Under the heading "drunkenness" are included cases of ordinary drunkenness, drunkenness and disorderliness, and habitual drunkenness.

The number of convictions is, as might naturally be expected, almost identical with the number of cases.

(ii) *Convictions per 10,000 of Population.* The convictions for drunkenness per 10,000 of the mean population during 1939 and each of the years from 1944 to 1948 are given in the following table :—

CONVICTIONS FOR DRUNKENNESS PER 10,000 OF THE MEAN POPULATION.

State or Territory.	1939.	1944.	1945.	1946.	1947.	1948.
New South Wales ..	117.8	119.8	149.3	210.9	225.5	272.7
Victoria ..	60.8	62.3	52.0	57.3	72.3	78.5
Queensland (a) ..	108.9	69.3	107.2	146.2	155.1	186.2
South Australia ..	43.5	(a) 63.0	55.6	(a) 67.1	(a) 75.2	(a) 82.1
Western Australia ..	56.6	85.6	82.9	82.2	84.5	84.8
Tasmania ..	17.0	11.9	9.0	17.8	16.9	18.9
Australian Capital Territory	91.2	43.7	24.7	85.6	165.1	227.8
Total ..	88.0	85.9	99.4	132.1	144.4	170.4

(a) Year ended 30th June following.

In the twenties the convictions for drunkenness averaged approximately 100 per 10,000 of mean population, but the rate fell away considerably during the following years and was only 57.1 in 1931. With the improvement in the social condition of the people following that year, the average rose steadily to 84.1 in 1936. The annual average for the period 1936 to 1939 was 82.7 as compared with 90.8 for the years 1940 to 1945. Following an appreciable increase in the previous year the convictions per 10,000 rose very steeply in 1946 to 132.1 and increased still further to 144.4 in 1947 and to 170.4 in 1948. Figures for the consumption of beer have followed a somewhat similar course. The average consumption of beer per head, which in the twenties was slightly over eleven gallons, fell to 7.32 gallons in 1931-32. It rose to 10.34 in 1936-37, averaged 11.75 gallons for the years 1936-37 to 1939-40 and increased further to an average of 13.23 for the years 1940-41 to 1945-46. Consumption increased in 1945-46, and appreciably so in 1946-47 to 15.94 gallons. In 1947-48 however, there was a slight decline to 15.33, but this was followed in 1948-49 by a substantial increase to 17.96 gallons.

The convictions for drunkenness taken by themselves are not altogether a satisfactory test of the relative sobriety of the inhabitants of each State, inasmuch as several important factors must be taken into consideration. The age and sex constitution of the people, for example, are by no means identical in all the States. Another factor is the distribution of the population. Arrest or summons for drunkenness obviously is more likely in the regions densely populated than in those sparsely populated. In addition allowance must be made for the attitude of the magistracy, the police and the general public in regard to the offence. Due account also must be taken of the effect of legislation dealing with the limitation of hours during which liquor may be sold in hotels.

(iii) *Consumption of Intoxicants.* The following table shows the consumption of spirits, wine and beer per head of the mean population in Australia during the years 1938-39 and 1943-44 to 1948-49 :—

CONSUMPTION OF INTOXICANTS IN AUSTRALIA.
(Imp. Galls.)

				Consumption per Head of Mean Population.		
Year.				Spirits.	Wine.	Beer.
1938-39	..	..	..	0.22	0.65	12.13
1943-44	..	..	..	0.23	1.17	13.00
1944-45	..	..	..	0.23	1.18	12.90
1945-46	..	..	..	0.32	0.96	13.45
1946-47	..	..	..	0.29	1.09	15.94
1947-48	..	..	..	0.31	1.37	15.33
1948-49	..	..	..	0.33	1.41	17.96

(iv) *Treatment of Drunkenness.* (a) *General.* Though the problem of the correct method of dealing with dipsomania is by no means an easy one, it seems fairly clear that the present plan of bringing offenders before magistrates, and subjecting them to the penalty of imprisonment or fine, has little deterrent effect, as the same offenders are constantly reappearing before the courts. During recent years the dangers of moral contamination in this way have been more accurately appreciated, and a system of classification of prisoners has been adopted whereby the petty offender is as far as possible kept from association with those convicted of more serious offences.

(b) *Remedial.* Legislation has been passed in each State providing for the commitment of inebriates to special Government institutions. The laws in the various States are as follows :—New South Wales, Inebriates Act 1912; Victoria, Inebriates Act 1928; Queensland, Inebriate Institutions Act 1896; South Australia, Inebriates Act 1908-1934, Convicted Inebriates Act 1913-1934; Western Australia, Inebriates Act 1912-1919; Tasmania, Inebriates Act 1885, Inebriate Hospitals Act 1892. Curative work was first undertaken by the Government of New South Wales in 1907. In most cases the institutes are connected with the gaols, and, naturally, custodial measures are still a strong feature in their management; nevertheless, the results of remedial measures have been encouraging.

8. *First Offenders.*—In all the States, statutes dealing with first offenders have been in force for many years. Existing legislation is as follows :—New South Wales, Crimes Act 1900 amended in 1924 and 1929, First Offenders (Women) Act 1919; Victoria, Crimes Act 1928; Queensland, Criminal Code Acts 1899 to 1945; South Australia, Offenders Probation Act 1913-1941; Western Australia, Criminal Code Act 1913-1942; Tasmania, Probation of Offenders Act 1934. The method of procedure is practically the same in all cases, i.e., with regard to most first offenders convicted of a minor offence the magistrate or judge is empowered to allow the offender to go free on recognizances being entered into for his good behaviour for a certain period. In practice, this humane law has been found to work excellently, very few of those convicted under it having been found to relapse into crime.

9. *Children's Courts.*—Special courts for the trial of juvenile offenders have been established in New South Wales, Victoria, Queensland, Western Australia and Tasmania, while Children's Courts, although not under that title, are provided for by the Maintenance Act 1926-1941 in South Australia. The object of these courts is to avoid, as far as possible, the unpleasant surroundings of the ordinary police court.

§ 2. Superior Courts (Judges' Courts).

1. Convictions at Superior Courts.—The following table shows for each State and Territory during 1948 and in Australia as a whole in that and the previous year the number of convictions at Superior Courts for each of the principal offences.

CONVICTIONS AT SUPERIOR COURTS, 1948.

Offence.	N.S.W. (a)	Vic.	Qld. (a)	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Australia.	
									1948.	1947.
I. OFFENCES AGAINST THE PERSON.										
Murder ..	9	1	4	2	1	..	6	..	23	24
Attempted Murder ..	1	1	3	..	..	..	2	..	7	3
Manslaughter ..	15	5	1	1	1	1	5	..	29	24
Rape ..	1	..	1	3	1	2	5	..	13	22
Other Offences against Females ..	85	71	24	38	6	8	7	1	240	240
Unnatural Offences..	108	32	15	20	5	3	6	..	189	146
Abortion and Attempts to Procure Bigamy ..	2	4	..	3	..	..	..	..	9	7
Suicide, Attempted..	67	26	8	6	2	3	..	..	112	102
Assault, Aggravated ..	..	1	..	..	..	3	..	..	4	2
Assault, Common ..	51	..	18	3	13	..	9	..	94	122
Other Offences against the Person ..	34	15	6	9	5	..	9	1	79	48
Total ..	7	29	12	11	6	..	..	..	65	57
	380	185	92	96	40	20	49	2	864	797
II. OFFENCES AGAINST PROPERTY.										
Burglary and House-breaking ..	560	323	84	36	27	25	14	3	1,072	1,027
Robbery and Stealing from the Person ..	57	23	11	6	6	1	..	..	104	128
Horse-stealing ..	..	..	..	..	..	..	..	..	..	2
Cattle-stealing ..	..	..	..	..	..	..	1	..	1	10
Sheep-stealing ..	..	..	3	2	2	..	..	..	7	1
Embezzlement and Stealing by Servants ..	20	10	6	2	3	..	2	..	43	38
Larceny, Other ..	161	148	21	15	16	..	13	1	375	405
Unlawfully using Horses, Cattle and Vehicles ..	13	..	..	..	1	..	..	..	14	12
Receiving ..	49	35	9	..	..	..	..	..	93	134
Fraud and False Pretences ..	62	20	7	7	2	..	..	1	99	92
Arson ..	3	..	2	..	3	1	..	..	9	10
Malicious Damage ..	6	3	..	1	2	2	..	..	14	10
Other Offences against Property ..	12	10	7	1	..	..	1	..	31	19
Total ..	943	572	150	70	62	29	31	5	1,862	1,888
III. FORGERY AND OFFENCES AGAINST THE CURRENCY.										
Forgery and Uttering Forged Instruments ..	13	15	1	9	..	..	2	..	40	56
Offences in relation to the Currency ..	5	..	1	..	..	..	..	..	6	2
Total ..	18	15	2	9	..	..	2	..	46	58
IV. OFFENCES AGAINST GOOD ORDER.										
	13	3	4	..	2	..	4	..	26	22
V. OTHER MISCELLANEOUS.										
Conspiracy ..	4	4	..	6	1	..	..	..	15	11
Perjury and Subornation ..	4	11	1	..	1	2	..	..	19	17
Other Offences ..	7	16	1	4	1	7	..	..	36	34
Total ..	15	31	2	10	3	9	..	..	70	62
Grand Total ..	1,369	806	250	185	107	58	86	7	2,868	2,827

(a) Year ended 30th June, 1949.

2. **Convictions at Superior Courts, Years 1939, 1944 to 1948.**—The number of convictions at superior courts and the rate per 10,000 of the mean population are given below for each of the years 1939 and 1944 to 1948 :—

CONVICTIONS AT SUPERIOR COURTS.

State or Territory.	1939.	1944.	1945.	1946.	1947.	1948.
NUMBER.						
New South Wales(a) ..	982	1,050	1,178	1,396	1,297	1,369
Victoria	690	792	692	712	785	806
Queensland(a) ..	214	218	229	261	270	250
South Australia ..	179	158	203	231	246	185
Western Australia ..	71	87	99	94	102	107
Tasmania	39	56	73	73	64	58
Northern Territory(a) ..	11	25	20	50	48	86
Australian Capital Territory	14	1	4	7	15	7
Total	2,200	2,387	2,498	2,824	2,827	2,868

PER 10,000 OF THE MEAN POPULATION.

New South Wales(a) ..	3.6	3.6	4.0	4.7	4.3	4.5
Victoria	3.7	4.0	3.5	3.5	3.8	3.9
Queensland(a) ..	2.1	2.0	2.1	2.4	2.4	2.2
South Australia ..	3.0	2.6	3.2	3.6	3.8	2.8
Western Australia ..	1.5	1.8	2.0	1.9	2.0	2.1
Tasmania	1.6	2.3	2.9	2.9	2.5	2.2
Northern Territory(a) ..	15.2	23.9	19.0	46.9	42.4	66.9
Australian Capital Territory	11.2	0.7	2.7	4.4	8.9	3.9
Total	3.2	3.3	3.4	3.8	3.7	3.7

(a) Year ended 30th June following.

The rate of convictions per 10,000 of mean population for Australia, which in 1930 stood at 4.0, fell each year thereafter until 1936 when the record low level of 2.3 was reached. It rose during each of the next three years to 3.2 in 1939 and after falling to 2.8 in 1940 rose in each of the next three years reaching 3.5 in 1943. Following a fall to 3.3 in 1944 the rate rose during 1945 and 1946 and stood at 3.7 in 1947 and 1948. Owing to the smallness of the population and the particular conditions prevailing there, the rates for the Territories naturally show considerable variation.

3. **Habitual Offenders.**—An account of the methods adopted in each State in connexion with habitual offenders is given in the following paragraphs.

(i) *New South Wales.* The *Habitual Criminals Act* of 1905 gives judges the power of declaring a prisoner, after a certain number of sentences, to be an habitual criminal, and as such to be detained until, in the opinion of the authorities, he is fit to be at large. At the 30th June, 1949, there were 50 persons in prison under this Act. Since the passing of the Act, 287 offenders, including 2 females, have been declared to be habitual criminals. So far the indeterminate sentence has been applied to the older hardened offender, but under the *Crimes Amendment Act* of 1924, when an accused person has been convicted on more than three occasions before a magistrate, the magistrate may direct an application to be made by the Clerk of the Peace to a Judge, to have the person so convicted declared an habitual offender.

(ii) *Victoria.* The *Indeterminate Sentences Act* came into force in Victoria in July 1908, and up to the end of June, 1948, 5,711 individual prisoners had been detained under its provisions. Of the 4,984 who were released on parole or probation, 2,063 were

reconvicted or returned, 2,582 had completed probation or not offended again, as so far known, and 311 were reporting on parole or probation. The report of the Indeterminate Sentences Board states that, allowing for those who were recommitted as a precautionary measure while in the indeterminate stage, as well as for those who were convicted on some minor charge after many years of freedom, the percentage of successful results approximates 59. It is claimed that this figure compares favorably with that obtained under the Borstal system in England. Section 516 of the Crimes Act 1928 provides that a Court of Petty Sessions consisting of two or more justices, one of whom is a stipendiary magistrate, may direct that a person who has been convicted and sentenced to not less than three months and who has previously been convicted on at least two occasions to certain offences be brought before a higher court to determine whether he shall be sentenced to detention in a reformatory prison during the Governor's pleasure. The higher court determines whether such sentence shall be imposed.

This provision is rarely if ever exercised and committals to reformatory prisons generally are by Supreme Court Judges, Chairmen of General Sessions and Children's Courts Magistrates pursuant to the provisions of 514 and 515 of the Crimes Act and 28 of the Children's Court Acts respectively.

(iii) *Queensland.* Sections 659A to 659I of the Queensland Criminal Code deal with habitual criminals. Only the Supreme Court or a judge thereof may declare a person to be an habitual criminal. An habitual criminal is to be detained in a reformatory prison (Section 659D) and there employed (Section 659F) under the provisions of 659G.

Where the Supreme Court or a judge recommends the discharge of an habitual criminal, the Governor may direct his discharge and may order him so long as he remains in Queensland to report at intervals during any period not exceeding two years.

(iv) *South Australia.* The Criminal Law Consolidation Act 1935-1940, provides that persons convicted of a certain number of indictable offences shall be detained, upon further conviction, during the Governor's pleasure. Proof of previous conviction is always relevant to the question of penalty.

(v) *Western Australia.* Under the Criminal Code Amendment Act of 1918, power is given to sentence prisoners to be detained in a reformatory prison during the Governor's pleasure, where such prisoner is deemed to be an habitual criminal, or in other special circumstances where the Court considers such a sentence is fit.

The number under preventative detention on 30th June, 1948 was 15, and the total number dealt with since the passing of the Act was 109.

(vi) *Tasmania.* Since the Indeterminate Sentences Act came into operation in 1922, 52 persons have been confined under its provisions; at present five are in custody, two being re-committals.

Of the 47 released on probation, 13 have been re-committed, two of them on three occasions.

4. **Capital Punishment.**—There were seven executions in Australia during the period 1939 to 1948. One took place in New South Wales (in 1939), three in Victoria (two in 1939 and one in 1942), two in South Australia (one in 1944 and one in 1946) and one in Tasmania (in 1946).

Under the Criminal Code Amendment Act 1922 capital punishment was abolished in Queensland.

In the early days of the history of Australia the penalty of death was attached to a large number of offences, many of which at the present time would be dealt with in the lower or magistrates' court. With the growth of settlement and the general amelioration in social and moral conditions, the list was, however, considerably curtailed, and the existing tendency is practically to restrict death sentences to cases of murder. It may be stated that in cases of rape, which is a capital offence in some of the Australian States, the penalty has been but sparingly inflicted during the last few years. Juries are reputed to be loth to convict on this charge, owing to the uncertainty whether sentence of death will be carried out.

The average annual number of executions in Australia from 1861 to 1880 was 9; from 1881 to 1900, 6; from 1901 to 1910, 4; from 1911 to 1920, 2; from 1921 to 1930, 2; and from 1931 to 1940, 1.

§ 3. Civil Courts.

1. **Lower Courts.**—The total number of plaints entered and the amounts awarded to plaintiffs during the years 1947 and 1948 are shown in the following table. Particulars for earlier years appear in preceding issues of the Official Year Book.

The figures represent the returns from the Small Debts Courts in New South Wales, Petty Session Courts in Victoria, Magistrates' Courts in Queensland, Local Courts of South Australia and Western Australia, Courts of Requests in Tasmania, Courts of Summary Jurisdiction in Northern Territory and Court of Petty Sessions in the Australian Capital Territory.

CIVIL CASES AT LOWER COURTS.

State.		1947.	1948.	State or Territory.		1947.	1948.
N.S.W.—				Tas.—			
Cases ..	No.	24,397	26,579	Cases ..	No.	8,971	8,495
Amount	£	135,243	146,525	Amount	£	30,415	34,296
Victoria—				Nor. Terr.(a)—			
Cases ..	No.	34,624	34,914	Cases ..	No.	229	254
Amount	£	261,860	261,229	Amount	£	(b)	5,308
Q'land(a)—				A.C.T.—			
Cases ..	No.	3,637	3,878	Cases ..	No.	141	302
Amount	£	78,807	96,316	Amount	£	2,120	1,513
S. Aust.—							
Cases ..	No.	11,997	12,562				
Amount	£	82,319	103,700				
W. Aust.—				Total—			
Cases ..	No.	14,067	15,623	Cases ..	No.	98,063	102,607
Amount	£	99,242	138,678	Amount	£	600,006	787,565

(a) Year ended 30th June following. (b) Not available.

2. **Superior Courts.**—The following table shows the transactions on the civil side in the Superior Courts during the years 1947 and 1948. The particulars given below include the number and amount of judgments entered by default or confession, or agreement, and differ from those in issues of the Official Year Book prior to No. 29, which related in most States only to causes actually tried during the year.

The New South Wales returns refer to judgments in the District Courts only, and exclude 1,130 judgments in 1947 and 1,313 judgments in 1948 signed in the Supreme Court, for which the amounts entered are not available.

CIVIL CAUSES AT SUPERIOR COURTS.

State.		1947.	1948.	State or Territory.		1947.	1948.
N.S.W.—				W. Aust.(a)—			
Causes	No.	3,539	4,016	Causes	No.	154	139
Amount	£	226,162	(b)	Amount	£	69,842	65,593
Victoria—				Tas.—			
Causes	No.	2,225	3,202	Causes	No.	281	284
Amount	£	244,819	325,137	Amount	£	28,282	38,021
Q'land(c)—				A.C.T.—			
Causes	No.	1,034	(d)	Causes	No.	3	4
Amount	£	83,002	(d)	Amount	£	6,016	100
S. Aust.—				Total—			
Causes	No.	713	653	Causes	No.	7,949	(b)
Amount	£	11,488	30,195	Amount	£	660,611	(b)

(a) Judgments signed and entered.
(d) Not yet available.

(b) Not available.

(c) Year ended 30th June following.

3. Divorces and Judicial Separations.—(i) *Number of Petitions and Divorces granted.* The following table shows the number of petitions for divorce, nullity of marriage and judicial separations filed in each State during 1948, and the number of divorces made absolute and judicial separations granted :—

PETITIONS FOR DIVORCE, ETC., AND DIVORCES GRANTED, 1948.

State or Territory.	Petitions for Divorce, Nullity of Marriage and Judicial Separation.			Divorces and Nullity made absolute.	Judicial Separations.
	By Husband.	By Wife.	Total.		
New South Wales	1,803	2,075	3,878	3,300	8
Victoria	959	968	1,927	1,679	2
Queensland	390	334	724	724	..
South Australia	338	408	746	630	2
Western Australia	331	378	709	702	..
Tasmania	116	164	280	185	..
Northern Territory	8	2	10	3	..
Australian Capital Territory ..	10	14	24	18	..
Total 1948	3,955	4,343	8,298	7,241	12
1947	4,453	4,415	8,868	8,791	13

(ii) *Number of Divorces, etc., granted, Years 1939, 1944 to 1948.* The number of divorces and judicial separations in each State and Territory for the year 1939 and the years 1944 to 1948 is shown in the following table. The figures refer, in the case of divorces, to decrees made absolute in each year and include decrees for nullity of marriage.

DIVORCES AND JUDICIAL SEPARATIONS : AUSTRALIA.

State or Territory.	1939.		1944.		1945.		1946.		1947.		1948.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
N.S.W. ..	1,545	8	2,044	5	3,129	10	2,792	6	3,821	5	3,300	8
Victoria ..	801	4	1,692	2	1,759	..	1,648	3	2,291	3	1,679	2
Queensland ..	a 224	..	719	2	903	4	1,161	1	933	2	724	..
S. Australia ..	243	..	497	2	604	2	656	1	690	3	630	2
W. Australia ..	244	..	601	..	619	..	731	..	814	..	702	..
Tasmania ..	80	..	115	..	172	..	219	..	210	..	185	..
Nor. Territory ..	(a) 2	(a) ..	(a) 4	(a) ..	(a) 6	(a) ..	4	..	7	..	3	..
Aus. Cap. Ter.	6	1	9	..	7	..	12	1	25	..	18	..
Total ..	3,145	13	5,681	11	7,199	16	7,223	12	8,791	13	7,241	12

(a) Year ended 30th June following.

(iii) *Average Annual Number of Divorces granted, Years 1871 to 1940.*—The average annual number of divorces and judicial separations in Australia for decennial periods from 1871 to 1940 were as follows :—

DIVORCES AND JUDICIAL SEPARATIONS: AUSTRALIA.

Year ..	1871-80.	1881-90.	1891-1900.	1901-10.	1911-20.	1921-30.	1931-40.
Average ..	29	70	358	399	744	1,699	2,521

(iv) *Grounds of Decree on which Divorce, etc., granted, Years 1947 and 1948.* The grounds on which divorces, including nullity of marriage, were made absolute and judicial separations granted during 1947 and 1948 in each State and Territory are given in the following table :—

GROUND ON WHICH DIVORCES AND JUDICIAL SEPARATIONS WERE GRANTED.

Grounds on which Decrees were Granted.	N.S.W.		Vic.		Qld.		S.A.		W.A.		Tas.		N.T.		A.C.T.		Aust.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
1947.																		
Adultery ..	1,116	3	834	1	351	..	408	3	359	..	76	..	4	..	7	..	3,155	7
Bigamy ..	20	..	7	..	3	..	3	..	6	..	..	..	..	..	1	..	40	..
Cruelty ..	28	1	..	..	..	1	36	..	..	..	5	..	..	..	..	..	69	2
Cruelty and Drunkenness ..	51	..	20	..	..	..	..	..	6	..	3	..	..	..	..	..	80	..
Drunkenness ..	18	..	2	..	..	..	6	..	2	..	..	..	..	..	..	..	28	..
Desertion ..	2,560	1	1,370	..	556	1	217	..	223	..	125	..	2	..	17	..	5,070	2
Imprisonment for Crime ..	9	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	15	..
Insanity ..	..	..	24	..	8	..	5	..	4	..	..	..	..	..	..	..	41	..
Maintenance ..	..	..	..	..	..	..	6	..	14	..	..	..	..	..	..	..	20	..
Separation for over 5 years ..	..	..	..	..	..	..	5	..	198	..	..	..	..	..	..	..	203	..
Other ..	19	..	28	2	15	..	4	..	2	..	1	..	1	..	..	..	70	2
Total ..	3,821	5	2,291	3	933	2	690	3	814	..	210	..	7	..	25	..	8,791	13

1948.

Adultery ..	792	5	508	2	225	..	323	..	286	..	55	..	2	..	2	..	2,193	7
Bigamy ..	12	1	9	..	2	..	1	..	5	..	..	..	..	..	..	..	29	1
Cruelty ..	48	1	5	..	1	..	29	1	..	..	1	..	1	..	..	..	85	2
Cruelty and Drunkenness ..	64	..	6	..	..	..	..	..	5	..	2	..	..	..	1	..	78	..
Drunkenness ..	29	..	2	..	..	..	4	..	..	..	..	..	..	..	..	..	35	..
Desertion ..	2,332	1	1,120	..	479	..	254	..	184	..	124	..	..	..	15	..	4,508	1
Imprisonment for Crime ..	11	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	17	..
Insanity ..	1	..	11	..	7	..	6	..	6	..	2	..	..	..	..	..	33	..
Maintenance ..	..	..	..	..	..	..	4	..	15	..	..	..	..	..	..	..	19	..
Separation for over 5 years ..	..	..	..	..	..	..	7	..	200	..	..	..	..	..	..	..	207	..
Other ..	11	..	12	..	10	..	2	1	1	..	1	..	..	..	..	..	37	1
Total ..	3,300	8	1,679	2	724	..	630	2	702	..	185	..	3	..	18	..	7,241	12

(v) *Ages of Husband and Wife at Time of Divorce, 1948.* The following table shows the number of husbands and wives who were divorced in each age group at the time when the divorce decree was made absolute. In 1948 the incidence of divorce was highest in the vicinity of the group 30 to 34 years :—

AGES OF PARTIES AT TIME OF DIVORCE : AUSTRALIA, 1948.

Ages of Husbands (Years.)	Ages of Wives (Years).											Total Husbands.
	Under 21.	21 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 54.	55 to 59.	60 and over.	Not stated.	
Under 21 ..	..	..	..	..	..	..	..	..	..	..	..	..
21 to 24 ..	16	103	37	..	I	..	..	..	..	..	..	157
25 to 29 ..	11	328	699	89	11	3	..	..	..	..	..	1,142
30 to 34 ..	2	83	705	603	122	14	I	I	..	..	I	1,534
35 to 39 ..	..	16	198	624	544	88	10	2	..	..	I	1,483
40 to 44 ..	..	5	61	197	455	356	54	8	..	2	2	1,142
45 to 49 ..	..	I	11	43	133	290	222	33	5	5	..	743
50 to 54 ..	..	..	6	12	40	94	157	132	24	3	..	468
55 to 59 ..	..	..	..	6	10	30	57	87	67	22	I	280
60 and over ..	..	..	..	2	6	9	18	45	51	75	..	206
Not stated ..	..	..	I	4	2	..	..	..	..	..	22	29
Total Wives	29	536	1,718	1,580	1,324	884	522	308	149	107	27	7,184

NOTE.—Excludes nullity of marriage.

(vi) *Duration of Marriage and Issue.* The following table shows the legal duration of marriage (i.e., the period from the date of marriage to the date when the decree nisi was made absolute) and the number of children born in respect of the decrees made absolute in 1948. Of the couples divorced in 1948, 38.9 per cent. had no children, 30.2 per cent. had one child, 17.3 per cent. had two children, 7.5 per cent. had three children and 6.1 per cent. had four or more children :—

DURATION OF MARRIAGE AND ISSUE : AUSTRALIA, 1948.

Duration of Marriage (Years.)	Number of Children.													Total Divorces made absolute.	Total children.
	0	1	2	3	4	5	6	7	8	9	10	Over 10	N.S.		
Under 1 year	I	..	..	..	..	..	..	..	..	..	..	..	..	I	..
1 and under	25	5	..	..	..	..	..	..	..	..	..	..	..	30	5
2 "	90	10	..	..	..	..	..	..	..	..	..	..	..	106	10
3 "	162	51	6	I	..	..	..	..	..	..	..	..	..	220	66
4 "	302	107	10	..	..	..	..	..	..	..	..	..	..	419	127
5 "	346	182	30	I	..	..	..	..	..	..	..	..	..	559	245
6 "	348	206	33	3	I	..	..	..	..	..	..	..	..	611	325
7 "	245	216	70	15	2	3	..	..	..	..	..	..	..	551	424
8 "	220	173	57	22	2	..	..	..	..	..	..	..	..	474	361
9 "	149	128	56	26	5	..	..	..	..	..	..	..	..	378	352
10 "	121	128	64	18	5	..	I	..	..	..	..	..	..	337	336
11 "	105	134	82	24	11	I	..	..	..	..	..	..	..	357	419
12 "	81	105	75	29	13	2	I	I	..	..	..	..	..	307	417
13 "	75	89	72	27	13	3	..	..	..	..	..	..	..	279	381
14 "	63	75	70	27	7	5	..	..	..	..	..	..	..	247	349
15 "	50	72	70	24	6	2	..	I	I	..	..	..	..	226	333
16 "	47	56	58	28	12	2	..	..	..	..	..	..	..	203	314
17 "	35	56	42	21	8	6	2	..	..	..	..	..	..	170	277
18 "	27	43	55	21	11	7	I	..	I	..	..	..	..	166	309
19 "	33	54	45	35	13	6	2	..	..	..	..	..	..	188	343
20 "	34	40	44	26	15	3	4	I	..	..	..	..	..	167	312
21 to 24 years	94	121	132	87	29	24	10	4	2	..	I	I	I	506	1,007
25 to 29 "	84	68	96	53	37	24	14	7	5	I	..	I	..	390	881
30 to 34 "	34	17	31	35	22	14	8	3	5	2	..	..	..	171	469
35 to 39 "	20	12	20	12	8	5	5	2	2	..	2	..	..	88	230
40 to 44 "	7	I	3	6	I	2	2	I	..	..	..	..	..	25	73
45 years and over	..	..	3	I	..	I	..	I	..	..	I	..	..	8	40
Not stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Divorces..	2,798	2,169	1,244	542	221	110	51	21	18	3	I	5	I	7,184	..
Total Children..	..	2,169	2,488	1,626	884	550	306	147	144	27	10	60	..	..	8,411

NOTE.—Excludes nullity of marriage.

(vii) *Number of Divorced Persons at Censuses 1891 to 1947.*—The following table shows the number and proportions of divorced males and females according to age in Australia at each Census from 1891 to 1947. Prior to 1911 no record was made of divorced persons in South Australia, so comparisons cannot be made to extend beyond that date.

DIVORCED PERSONS : AGE DISTRIBUTION, AUSTRALIA.

Age last Birthday.	Number.						Proportion per 10,000 of the Sex.					
	1891. (a)	1901. (a)	1911.	1921.	1933.	1947.	1891. (a)	1901. (a)	1911.	1921.	1933.	1947.
MALES.												
Years—												
15-19 ..	..	..	2	11	..	3	..	..	..	..	..	..
20-24 ..	10	21	27	55	73	258	..	1	..	2	..	8
25-29 ..	37	77	137	321	501	1,957	2	5	7	14	18	66
30-34 ..	60	167	286	580	1,100	3,449	4	11	17	26	44	116
35-39 ..	68	262	321	661	1,575	3,900	7	17	21	34	69	137
40-44 ..	41	233	361	592	1,777	3,694	5	19	25	35	77	143
45-49 ..	34	154	407	533	1,614	3,309	5	17	30	37	77	140
50-54 ..	27	131	338	498	1,256	2,755	4	19	31	37	73	133
55-59 ..	28	76	204	425	877	2,327	6	14	28	36	66	117
60-64 ..	16	55	134	281	611	1,572	4	12	26	31	53	99
65-69 ..	5	33	76	155	477	941	2	9	19	28	51	81
70-74 ..	5	14	43	86	270	523	3	5	14	26	41	68
75-79 ..	1	7	12	27	122	233	1	5	6	14	34	46
80-84 ..	..	3	14	7	35	98	..	5	16	7	25	37
85 and over ..	..	1	6	1	10	33	..	5	17	2	17	28
Age 15 and over ..	332	1,234	2,368	4,233	10,298	25,052	3	10	15	23	42	89

FEMALES.												
Years—												
15-19 ..	2	2	1	8	6	18	..	..	..	..	..	1
20-24 ..	16	56	71	168	230	1,008	1	3	3	7	8	33
25-29 ..	60	168	239	526	960	3,144	4	11	13	22	37	104
30-34 ..	49	244	332	756	1,565	4,107	5	18	21	34	66	137
35-39 ..	40	287	374	713	1,939	4,239	5	24	26	37	82	154
40-44 ..	26	178	366	621	1,880	3,865	4	19	29	38	83	160
45-49 ..	19	107	319	406	1,598	3,344	4	16	29	37	80	146
50-54 ..	10	52	229	405	1,066	2,858	2	10	27	34	65	131
55-59 ..	4	28	79	280	662	2,174	1	6	14	28	51	110
60-64 ..	1	11	59	217	485	1,401	..	3	13	28	42	85
65-69 ..	..	10	38	70	287	843	..	3	10	14	32	66
70-74 ..	1	5	14	25	136	341	1	3	5	8	21	38
75-79 ..	..	..	16	14	58	157	..	..	10	7	16	26
80-84 ..	..	1	2	2	12	58	..	2	3	2	8	18
85 and over ..	..	..	1	3	4	19	..	3	..	5	5	11
Age 15 and over ..	228	1,149	2,140	4,304	10,888	27,516	3	10	15	24	46	97

(a) Excludes South Australia.

4. *Bankruptcies.*—Particulars relating to bankruptcy in each State up to the end of 1927 were incorporated under this heading in issues of the Official Year Book prior to No. 23. Under the terms of the Bankruptcy Act 1924-1948 jurisdiction in bankruptcy and insolvency was taken over by the Commonwealth from 1st August, 1928. The Act made provision for the declaration of districts, and each State (except Queensland and Northern Territory) has been declared a bankruptcy district. The bankruptcy district of New South Wales includes the Australian Capital Territory. Queensland has been divided into three districts corresponding to the three Supreme Court districts in that State. Operations under the Act for the year ended 31st July, 1948 are given in the following table. For the purposes of comparison, the annual averages for periods between the years 1920 and 1948 are appended to the table.

FEDERAL BANKRUPTCY ACT, 1947-48.

Particulars.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Australia.
Sequestration Orders and Orders for Administration of Deceased Debtors' Estates	Number .. 122 Liabilities £ 212,317 Assets £ 55,469	50 54,014 16,788	49 37,808 28,665	22 33,833 7,538	16 28,092 4,668	12 12,899 3,901	..	271 378,963 117,029
Division 5—Compositions, etc., after Bankruptcy	Number .. Amount under ros. Amount over ros.	4 2 2	4 4 ..	3 3 ..	1 1 ..	..	..	12 10 2
Compositions without Bankruptcy Part XI.	Number .. 1 Liabilities £ 2,113 Assets £ 691	1 11,357 10,237	.. .. ..	11 12,171 13,362	8 12,552 9,669	..	..	21 38,193 33,959
Deeds under Part XI.	Number .. Liabilities £ .. Assets £ ..	1 44,255 12,964	.. .. ..	2 3,799 3,070	1 1,508 695	..	..	4 49,562 16,729
Deeds of Arrangement, Part XII.	Number .. 24 Liabilities £ 56,540 Assets £ 56,792	18 88,687 52,433	14 35,143 30,697	.. .. ..	.. .. ..	..	..	56 180,370 139,922
Total, 1947-48	Number .. 147 Liabilities £ 270,970 Assets £ 112,952	70 198,313 92,422	63 72,951 59,362	35 49,803 23,970	25 42,152 15,032	12 12,899 3,901	..	352 647,088 307,639
Average 5 years ended 1947-48	Number .. 95 Liabilities £ 165,066 Assets £ 80,963	51 98,525 39,948	25 27,584 22,857	33 86,491 56,634	16 26,288 12,530	7 3,946 1,215	..	227 407,900 214,147
Average 5 years ended 1942-43	Number .. 434 Liabilities £ 664,121 Assets £ 429,462	296 297,840 127,977	134 219,588 152,602	357 1,000,376 730,482	81 236,178 166,561	45 28,293 14,475	..	1,347 2,446,802 1,621,741
Average 5 years ended 1937-38	Number .. 496 Liabilities £ 707,075 Assets £ 477,547	383 627,960 277,004	183 259,921 194,174	544 1,566,821 1,076,347	108 228,023 187,933	58 56,944 33,688	..	1,772 3,448,276 2,247,488
Average 5 years ended 1932-33	Number .. 959 Liabilities £ 1,920,030 Assets £ 1,552,489	689 1,419,102 1,006,120	305 605,780 493,108	637 1,043,637 796,478	344 871,520 1,215,686	95 116,014 82,227	..	3,029 5,976,652 5,146,188

It is pointed out that the procedure in certain States has been influenced largely by the procedure in force prior to the passing of the Commonwealth Act, and that, therefore, no particular significance attaches to the large number of compositions, etc., in South Australia and Western Australia.

The Bankruptcy Act 1930 created a Federal Court of Bankruptcy and provided for the appointment of a Judge or two Judges thereto. In 1930 a Commonwealth Judge in Bankruptcy was appointed in addition to the State Judges to deal with bankruptcy work in New South Wales and Victoria, as the Courts in these States were unable to cope with the business. All the bankruptcy cases in these States are now heard in the Federal Court which sits in Sydney and Melbourne alternatively.

5. **High Court of Australia.**—Under the provisions of Section 71 of the Commonwealth Constitution, the judicial power of the Commonwealth is vested in a Supreme Court called the High Court of Australia, and in such other courts as the Parliament creates or invests with federal jurisdiction. The Commonwealth High Court possesses both original and appellate jurisdiction. The powers of the Court are defined in the Commonwealth Constitution, and in the Judiciary Act 1903-1946. The Court consists of a Chief Justice and six other judges. Sittings of the Court are held in the capitals

of the various States as occasion may require. The High Court functions as a Court of Appeal for Australia. The following statement shows the transactions of the High Court for 1947 and 1948.

TRANSACTIONS OF COMMONWEALTH HIGH COURT.

Original Jurisdiction.	1947.	1948.	Appellate Jurisdiction.	1947.	1948.
Number of writs issued	104	92	Number of appeals set down for hearing ..	87	85
Number of causes entered for trial ..	28	13	Number allowed ..	26	29
Verdicts for plaintiffs	21	19	Number dismissed ..	47	44
Verdicts for defendants	14	9	Otherwise disposed of	16	8
Otherwise disposed of ..	4	7			
Amount of judgments	£84,554	£23,689			

During 1947 and 1948 respectively the High Court dealt also with the following: Appeals from Assessments under Taxation Assessment Act, 23, 23; Special cases stated for the opinion of the Full Court, 12, 9; Applications for Prohibitions, etc., 47, 16. The fees collected amounted to £1,171 in 1947 and £1,042 in 1948.

6. Commonwealth Court of Conciliation and Arbitration.—A detailed statement regarding the operation of this Court, which was established under the Commonwealth Conciliation and Arbitration Act 1904-1949 will be found in Chapter XI. "Labour, Wages and Prices", and in the *Labour Report*.

§ 4. Police and Prisons.

1. *General*.—Early issues of the Official Year Book (see No. 4, p. 918) contain a *résumé* of the evolution of the police force in Australia up to the passing of the Police Act 1862 (25 Vic. No. 16) in New South Wales.

2. *Duties of the Police*.—In addition to the ordinary employment attaching to their office, the police are called upon to perform many duties which in other countries are carried out by various functionaries. Thus, in New South Wales, it has been estimated that one-fifth of the time of the force was taken up in extraneous duties not connected with the protection of life and property, while the cash value of the services rendered to other Government departments was stated as over £200,000 per annum. The Queensland Commissioner refers to the circumstance that in 1941-42 no less than 54 important subsidiary offices were held by the police. In South Australia, the Commissioner alludes to the large number of subsidiary duties performed by police officers, and mentions that for the year ended June, 1948, many inquiries were made on behalf of other State and Commonwealth departments.

3. *Strength of Police Force*.—(i) *General*. The strength of the police force in each State during 1939 and the years 1944 to 1948 is given in the following table. It may be mentioned that the police forces (with the exception of the small body of Commonwealth police maintained in the Northern Territory and in the Australian Capital Territory) are entirely under State control, but, by arrangement, the Commonwealth Government utilizes their services in various directions, such as acting as aliens registration officers, and policing the liquid fuel regulations, etc.

STRENGTH OF POLICE FORCES.

State or Territory.	Area of State in Sq. Miles.	No. of Police.					
		1939.	1944.	1945.	1946.	1947.	1948.
New South Wales	309,433	3,907	3,630	3,710	3,993	4,242	4,333
Victoria..	87,884	2,333	2,209	2,131	2,188	2,268	2,385
Queensland(a)	670,500	1,400	1,730	1,741	1,734	1,796	1,982
S. Australia(a)	380,070	905	884	922	921	958	975
W. Australia(a)	975,920	600	571	626	661	673	730
Tasmania(a)	26,215	296	286	317	314	342	340
Nor. Territory(a)	523,620	48	43	46	40	53	65
Aust. Cap. Terr.	939	17	20	22	29	36	40
Total	2,974,581	9,566	9,373	9,515	9,880	10,368	10,850

(a) 30th June of year following.

The figures for New South Wales for 1948 exclude 19 "black trackers" and one "cadet tracker" (i.e., natives employed in detection of offenders chiefly in outlying districts) and 4 matrons, while the Victorian returns exclude one black tracker. For Queensland the figures exclude 33 black trackers, for South Australia 4 wardresses and 4 black trackers, for Western Australia 33 black trackers and 5 female searchers, and for the Northern Territory 42 black trackers. Women police are employed in all the States, the respective numbers for 1948 included in the table above being:—New South Wales 33, Victoria 14, Queensland 7, South Australia 19, Western Australia 8, Tasmania 4, and Australian Capital Territory 1. Their work is mainly preventive, and the importance and usefulness of their duties have been referred to in very high terms by the Chief Officers of Police. In his report for 1948 the Commissioner of Police in New South Wales refers to the valuable work performed by the women police in connexion with vice and crime, particularly in relation to females and neglected children. They also carry out escort duties in respect of female prisoners. The experience in other States has been of a similar nature.

(ii) *Proportion to Population.* The average number of persons in the various States to each police officer during 1939 and the years 1944 to 1948 is shown in the following table. In considering these figures allowance must, of course, be made for the unequal area and unequal distribution of the population of the various States.

POLICE FORCES IN RELATION TO POPULATION.

State or Territory.	Number of Persons per Sq. Mile, 1947 Census.	Persons to each Police Officer.					
		1939.	1944.	1945.	1946.	1947.	1948.
New South Wales	9.65	708	799	791	742	709	707
Victoria	23.38	807	904	946	932	909	883
Queensland(a)	1.65	704	623	626	638	628	581
South Australia(a)	1.70	662	710	689	701	688	690
Western Australia(a)	0.51	789	854	787	760	766	730
Tasmania(a)	9.81	812	869	795	819	767	792
Northern Territory(a)	0.02	167	245	230	272	235	212
Aust. Cap. Territory	18.00	767	730	701	565	475	444
Total	2.55	733	786	782	763	739	721

(a) 30th June of year following.

4. Prison Accommodation and Prisoners, 1947 and 1948.—The table below shows the number of prisons in each State, the accommodation therein, and the number of prisoners under sentence at the end of 1947 and 1948 :—

PRISON ACCOMMODATION AND PRISONERS.

State or Territory.	Number of Prisons.		Accommodation in—				Prisoners at End of Year.	
			Separate Cells.		Wards.			
	1947.	1948.	1947.	1948.	1947.	1948.	1947.	1948.
New South Wales(a) ..	15	15	2,214	2,242	..	..	1,587	1,717
Victoria ..	9	9	1,288	1,288	340	340	915	912
Queensland ..	9	(a) 8	611	(a) 570	141	(a) 109	359	(a) 376
South Australia ..	15	15	673	673	173	173	267	230
Western Australia(a) ..	21	21	556	551	146	61	281	314
Tasmania(a) ..	2	2	154	154	4	1	100	93
Northern Territory(a) ..	2	2	12	12	19	19	32	40
Total ..	73	72	5,508	5,490	823	703	3,541	3,682

(a) Year ended 30th June following.

The figures refer to prisoners under sentence and exclude aborigines. There are no gaols in the Australian Capital Territory, but there is a lock-up consisting of three cells attached to the police station at Canberra and a lock-up at Jervis Bay, where offenders are held while awaiting trial or serving short sentences not exceeding one week imposed by the Magistrate's Court.

5. Prisoners in Gaol, 1939, 1944 to 1948.—The number of prisoners in gaol at 31st December in each of the years 1939 and 1944 to 1948 and the proportion per 10,000 of the population are given in the following table. The figures refer to prisoners under sentence and exclude aborigines and debtors.

PRISONERS IN GAOL.

State or Territory.	1939.	1944.	1945.	1946.	1947.	1948.
NUMBER.						
New South Wales(a) ..	1,357	1,856	1,684	1,847	1,587	1,717
Victoria ..	1,144	1,101	966	952	915	912
Queensland ..	261	473	493	356	359	(a) 376
South Australia ..	199	224	213	250	267	230
Western Australia(a) ..	244	291	279	290	281	314
Tasmania(a) ..	108	87	96	120	100	93
Northern Territory ..	23	22	4	19	(a) 32	(a) 40
Total	3,336	4,057	3,735	3,834	3,541	3,682

PER 10,000 OF THE POPULATION.

New South Wales(a) ..	4.9	6.4	5.7	6.2	5.2	5.5
Victoria ..	6.1	5.5	4.8	4.7	4.4	4.3
Queensland ..	2.6	4.4	4.5	3.2	3.2	(a) 3.3
South Australia ..	3.3	3.6	3.4	3.9	4.1	3.5
Western Australia(a) ..	5.2	6.0	5.7	5.8	5.5	5.9
Tasmania(a) ..	4.5	3.5	3.8	4.7	3.8	3.5
Total	4.8	5.5	5.0	5.1	4.6	4.7

(a) 30th June of year following.

After remaining stationary at 6.5 per 10,000 for the four years ended 1932 the proportion of prisoners in gaol to the total population declined each year to 4.5 in 1937. It fluctuated slightly during the next four years but remained under 5.0. The proportion was 4.9 in 1942 and rose slightly above this rate to 5.5 in 1944 and fell to 5.1 in 1946 and to 4.7 in 1948. This figure compares most favourably with that obtaining in 1891, when the proportion was as high as 16 per 10,000. Rates for the Northern Territory have not been included on account of the prevailing abnormal conditions.

6. Improvement in Prison Methods.—In previous issues of the Official Year Book a fairly detailed account is given of the improvements effected in each State during recent years in regard to methods of prison management (*see* Official Year Book No. 22, pp. 471-4), but this information is not repeated in the present volume.

§ 5. Cost of Administration of Justice.

1. Expenditure by the States.—The table below shows the expenditure from Consolidated Revenue during 1938-39 and 1946-47 and 1947-48 in connexion with the administration of justice in each of the States.

It is difficult to obtain comparable figures of the total costs of the various services under this heading, therefore net costs have been substituted for gross expenditure. It will be noted that in South Australia and Western Australia the receipts for legal fees and registrations exceed the actual expenditure under "Justice".

NET EXPENDITURE ON ADMINISTRATION OF JUSTICE.

State.	Net Expenditure.			Per Head of Mean Population.		
	Justice.	Police.	Prisons.	Justice.	Police.	Prisons.
	£	£	£	s. d.	s. d.	s. d.
1938-39.						
New South Wales ..	178,941	1,445,819	199,625	1 4	10 7	1 6
Victoria ..	103,903	790,626	103,202	1 1	8 6	1 1
Queensland..	66,095	580,581	35,144	1 4	11 6	0 8
South Australia ..	-27,876	306,387	36,171	-0 11	10 4	1 3
Western Australia ..	-28,962	251,311	28,466	-1 3	10 9	1 3
Tasmania ..	22,780	118,478	15,071	1 11	10 0	1 3
Total ..	315,881	3,499,202	417,679	0 11	10 1	1 2
1946-47.						
New South Wales ..	246,085	2,014,605	204,846	1 8	13 7	2 0
Victoria ..	137,459	1,187,444	144,910	1 4	11 8	1 5
Queensland..	94,744	904,216	64,046	1 9	16 6	1 2
South Australia ..	-59,974	422,449	47,799	-1 10	13 2	1 6
Western Australia ..	226	300,103	52,683	..	12 1	2 1
Tasmania ..	33,343	152,397	24,046	2 8	11 11	1 11
Total ..	452,783	4,981,214	629,230	1 3	13 3	1 8
1947-48.						
New South Wales ..	333,177	2,321,184	385,341	2 3	15 5	2 7
Victoria ..	197,267	1,335,476	163,229	1 11	12 11	1 7
Queensland..	107,449	1,033,492	77,682	1 11	18 7	1 5
South Australia ..	-36,071	497,147	57,089	-1 2	15 3	1 9
Western Australia ..	-2,113	368,258	62,985	-0 1	14 6	2 6
Tasmania ..	37,823	173,906	27,705	2 11	13 3	2 1
Total ..	637,532	5,729,463	774,931	1 8	15 1	2 0

2. **Commonwealth Expenditure.**—The expenditure shown in the previous table is that incurred by the State Governments only, and does not include expenditure of the Commonwealth Attorney-General's Department, which is given hereunder for the years 1938-39 and 1943-44 to 1947-48 :—

EXPENDITURE OF THE COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT.

(£.)							
Year.					Gross Expenditure.	Receipts.	Net Expenditure.
1938-39	..	..	..	..	281,497	111,036	170,461
1943-44	..	..	..	..	386,749	117,128	269,621
1944-45	..	..	..	..	433,646	140,198	293,448
1945-46	..	..	..	..	472,604	135,239	337,365
1946-47	..	..	..	..	569,234	155,419	413,815
1947-48	..	..	..	..	688,572	178,591	509,981

The totals for each year include expenditure in connexion with patents and copyright which amounted in 1947-48 to £127,862. The Commonwealth took over jurisdiction in bankruptcy in August, 1928, and the expenditure thereon in 1947-48 amounted to £49,200, including the salary of the Commonwealth Judge, £3,500. Expenditure in connexion with the Australian Capital Territory police amounted in 1947-48 to £24,720, and £11,150 was expended on miscellaneous items including the Law Court, Titles Office and Industrial Board. Revenue of the Attorney-General's Department amounted for the year 1947-48 to £178,591, comprising £124,418 for patents, copyright, trademarks and designs, £16,550 for bankruptcy and £37,623 miscellaneous, including fees and fines.

In addition to the foregoing a sum of £38,849 was expended in the Northern Territory during 1946-47 and £51,111 in 1947-48 by the Department of the Interior on the administration of justice, including the costs of the police force and prisons.

CHAPTER VIII.

PUBLIC HEALTH AND RELATED INSTITUTIONS.

A—PUBLIC HEALTH.

§ 1. State Public Health Legislation and Administration.

1. *New South Wales*.—The Department of Public Health comes under the jurisdiction of the Minister for Health, with an Under Secretary as Permanent Head of the Department for administrative purposes.

There is also a Director-General of Public Health and Chief Medical Adviser to the Government, who is ex-officio President of the Board of Health and Chairman of the Nurses' Registration Board. He is assisted by a Deputy Director-General.

The Inspector-General of Mental Hospitals who, under present arrangements, is also the Director-General of Public Health, is responsible for the administration of that part of the Lunacy Act relating to the care and treatment of mental patients. There is also a Deputy Inspector-General.

The following statutory authorities are constituted under Acts administered by the Minister for Health—Board of Health (Public Health Act), Hospitals Commission of N.S.W. (Public Hospitals Act), Milk Board (Milk Act), Metropolitan Meat Industry Commissioner (Meat Industry Act), Dental Board (Dentists Act), Pharmacy Board (Pharmacy Act), Medical Board (Medical Practitioners Act), Board of Optometrical Registration (Opticians Act), Ambulance Transport Service Board (Ambulance Transport Service Act), Physiotherapists Registration Board (Physiotherapists Registration Act) and Nurses' Registration Board (Nurses' Registration Act).

The Department's activities extend over the whole of the State and embrace all matters relating to the public health and the general medical work of the Government. These include the following :—(a) Supervision of the work of local authorities (municipal and shire councils) in relation to public health matters connected with the following Acts :—Public Health Act, Noxious Trades Act, Pure Food Act and Private Hospitals Act; (b) Scientific Divisions (Government Analyst, Microbiological Laboratory, and Division of Industrial Hygiene); (c) Tuberculosis and Social Hygiene Divisions; (d) Medical Officers of Health at Sydney, Broken Hill, Newcastle, Wollongong, Bathurst and Lismore; (e) State Hospitals and Homes and State Sanatoria; (f) Mental Hospitals; (g) Public Hospitals (Hospitals Commission); (h) Maternal and Baby Welfare (Baby Health Centres); (i) School Medical and Dental Services; and (j) Publicity, Nutrition and Library Services.

2. *Victoria*.—Administration of all the provisions of the Health Acts insofar as they can be carried out within the geographical limits of any municipality, is entrusted to the Council of that municipality.

Municipal administration is co-ordinated and supervised by the Commission of Public Health, composed of the Chief Health Officer as chairman, and six members representing the Government and municipalities—cities, towns, boroughs and shires. On this basic structure the manifold activities of a modern Health Department have been built.

The Health Act 1919 and later Amending Acts were consolidated in Health Act 1928 without any essential amendments bearing on administration.

The Ministry of Health Act 1943, made the Minister responsible for all Acts administered up to the time by the Department of Health, as well as the Hospitals and Charities Acts and the Mental Hygiene Acts, thus placing under one Ministry the many and diverse operations of State medicine.

The Chief Health Officer administers the Maternal and Child Hygiene Branch, embracing pre-natal hygiene, infant health, pre-school child hygiene, school medical and dental services, and the newly constituted Tuberculosis Branch, which comprises State sanatoria, tuberculosis clinics and tuberculosis bureaux.

Infectious disease control is carried out by the eight District Health Officers and their staffs, in collaboration with the local health authorities where any specific infection is unduly prevalent. Immunization against diphtheria is constantly practised, and largely owing to this work the incidence of the disease has been reduced from 3,254 cases and 93 deaths in 1927 to 400 cases and 13 deaths in 1948. More than half the school children have been immunized in municipal campaigns, in addition to many others who have received treatment from their family doctors.

Most large country towns in Victoria are now sewered and apart from a mild epidemic in a suburb of Melbourne in 1944 typhoid fever has been reduced to a negligible disease.

Sewerage projects, public buildings and hospital construction are the responsibility of the Engineering Division of the Health Department. This Division performs an advisory and supervisory function in municipal undertakings.

The Industrial Hygiene Division supervises the environmental conditions of the 300,000 persons employed in industry in the State and consists of two medical officers, two special scientific officers and four inspectors.

The control and treatment of venereal diseases is undertaken by a special division of the Department, and clinics for prophylaxis and treatment are attached to all hospitals receiving Government aid throughout the State.

Food and drug standards are specified by a committee of specially qualified members. Municipal and departmental officers ensure that these standards are observed.

Acts administered by the Department of Health include—Health Acts, Goods Act, Infectious Diseases Hospital Acts, Masseurs Acts, Midwives Act 1928, Nurses Acts, Venereal Diseases Act 1928, Heatherton Sanatorium Act, Birth Notification Acts, Hairdressers Registration Acts, Anti-Cancer Council Act, Dietitians Registration Act, Mental Hygiene Acts, Mental Deficiency Acts, Hospitals and Charity Acts.

3. **Queensland.**—(i) *General.* The Health Acts 1937 to 1948, are administered by the Director-General of Health and Medical Services, under the direction of the Minister for Health and Home Affairs. The executive staff consists of the Director-General, Deputy Director-General, State Health Officer, and twenty-seven food and sanitary inspectors and cadets. In addition, there is a Laboratory of Microbiology and Pathology under the control of a Director assisted by a medical officer, bacteriologists, and ancillary staff. Among other duties, the staff of this laboratory performs any necessary medico-legal work. A medical officer controls the Enthetic Diseases Section with the assistance of a female medical officer, nurses, and trained attendants, while a microscopist and an inspector have charge of the Hookworm Campaign. A Weil's Disease Campaign with head-quarters in Innisfail, North Queensland, is operating with a staff of five health inspectors.

The following services also come under the purview of the Department:—School Health Services, Maternal and Child Welfare Services, Chemical Laboratory, Mental Hygiene, Industrial Hygiene, and supervision of private hospitals.

The Health Act of the State have made it obligatory for cases of certain diseases to be notified to the Health Department. These diseases are either of an infectious or contagious nature.

Branch offices, in charge of inspectors, are located at Toowoomba, Rockhampton, Mackay, Townsville, Cairns and Thursday Island, which, in conjunction with the Brisbane staff, are responsible for the enforcement of provisions of the Health Acts and Regulations dealing with food and drugs, milk sellers, health (food supply), fish supply, poisons, etc., and are concerned in a supervisory capacity with Local Authority health administration.

(ii) *Immunization*.—A system of immunization of young children is being carried out by Local Authorities as a preventive of diphtheria and whooping cough.

Diphtheria. Diphtheria prophylaxis by means of formalized toxoid has continued to grow in favour, and, in proportion to population, more children have been immunized in Queensland than in any other State in Australia. It has been observed that in a few instances children who have submitted to immunizing measures have later developed diphtheria, but no deaths have occurred in such cases.

Within the Greater Brisbane area, the City Health Authority, in conjunction with the School Health Services, carries out a full programme of diphtheria immunization of school and pre-school children, both at the schools and daily at the City Hall. These measures are exercising a beneficial effect. It is estimated that 88 per cent. of children in Brisbane between the ages of 1 and 14 years have been immunized. Similar campaigns are carried out by many other Local Authorities.

Among the many thousands of children annually immunized against diphtheria in Queensland by the formalized toxoid method, no instance of dangerous symptoms arising therefrom has been reported, and the people of the State are educated to the value of diphtheria immunization. Alum toxoid has not been employed for public immunization in Queensland to any extent.

Whooping Cough.—As a result of the improvement in efficacy of the pertussis or whooping cough vaccine, several Local Authorities have inaugurated a campaign against this disease. The Brisbane City Council has already commenced, and is immunizing children free of charge at four sessions per week, in addition to which its Medical Officer of Health visits institutions for this purpose.

Immunizing agents against diphtheria and whooping cough are provided free to Local Authorities by the Commonwealth Government.

(iii) *Hospitals*. (a) *General*. There is a system of public hospitals throughout the State. The Brisbane General, South Brisbane Auxiliary, the Children's and the Brisbane Women's Hospitals, provide public hospital accommodation for Brisbane. In addition, there are 68 private hospitals registered in the State, 35 per cent. of which are in Brisbane. The Mater Misericordiae has public, intermediate, private, and children's sections, and St. Martin's is a large private hospital. In the whole State, during 1947-48, there were 112 public hospitals, a tuberculosis sanatorium, and seven ambulance brigades, which were administered by 63 District Hospital Boards. Five other hospitals received aid from the Government. There were also 105 public maternity hospitals or sections of the above hospitals.

Public hospitals supply free consultation and treatment, including radiological and pathological service, to out-patients. In-patient treatment in the public wards is also free. In conjunction with public hospitals, nineteen dental clinics (excluding the Brisbane Dental Hospital) and sixteen branch clinics are in operation.

The above-mentioned 68 private hospitals in Queensland, are registered under the provisions of the Health Acts 1937 to 1948 (Division XI.). Licences may be issued under four categories:—(a) A general private hospital for medical, surgical, and maternity cases; (b) A lying-in hospital for maternity cases only; (c) A hospital for mental cases only (other than persons who have been certified as insane pursuant to the *Insanity Acts*); (d) Any hospital for the treatment of mothers and/or infants.

Convalescent homes are not licensed or registrable.

Lepet settlements are situated at Peel Island, in Moreton Bay, and at Fantome Island, near Townsville, each with a full-time medical officer. The former is for white persons only, and the latter for aborigines. In Brisbane there is an Institution for the Blind, and an Institution for the Deaf.

(b) *Public Hospitals*.—The Hospitals Act Amendment Act 1944, provided, as from 1st July, 1945, that all the public hospitals in the State would come within the jurisdiction of District Hospitals Boards. Each board consists of not less than five and not more than nine members, including the chairman. One of the members is a representative elected by the component Local Authorities. The chairman and the remaining members are appointed by the Governor in Council.

The State Government is responsible for the net annual cost of administration and maintenance of all hospitals controlled by Hospital Boards but from 1st January, 1946, the Commonwealth, under the Hospital Benefits Scheme, paid six shillings per patient per day for patients in public and private sections of public hospitals. The State Government agreed not to make any charge for patients in public sections of public hospitals. The Commonwealth subsidy extends to approved private hospitals. The amount was increased to eight shillings per day from 1st July, 1948, for patients in public wards of public hospitals, and from 1st November, 1948, for all other public hospital patients and private hospital patients.

4. **South Australia.**—The Central Board of Health consists of five members, three of whom (including the Chairman, who is a permanent head of the Department) are appointed by the Government, while one each is elected by the metropolitan local boards and all other local boards. The Health Act 1935-1947 provides that every municipal and district council shall be the Local Board of Health for their respective districts. There are 143 of these local boards under the general control and supervision of the Central Board. The Central Board of Health Department administers the following Acts—The Health Act, 1935-1947; The Food and Drugs Act, 1908-1943; The Noxious Trades Act, 1943; The Dangerous Drugs Act, 1934; The Bakehouses Registration Act, 1945-1947; The Venereal Diseases Act, 1947; The Early Notification of Births Act, 1926; and the Vaccination Act, 1936.

The Board is also concerned to some degree with Acts relating to local government, abattoirs and cremation. The Department also conducts the State X-ray Health Survey. There are two full-time medical officers who assist the Chairman in the administration of the various Acts. Four inspectors appointed under the Health and Food and Drugs Act periodically visit the local districts and see generally that the local boards are carrying out their duties. An inspector in company with an analyst visits country districts and purchases samples of milk which are analysed on the spot. A nurse inspector is employed in advising and assisting local boards in connexion with outbreaks of infectious diseases. In outlying districts there are three part-time officers of health and fifteen part-time inspectors directly responsible to the Board.

5. **Western Australia.**—The legislation in this State is the Health Act 1911-1948. This was consolidated and reprinted in 1944 but since that date three separate amendments have been passed. The central authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The local authorities comprise (a) Municipalities, and (b) Road Boards.

It is also provided that a Local Board of Health may be set up in lieu of a Road Board. This method of control is no longer used and in fact the whole State is under the local administration of the respective Municipality or Road Board. In case of emergency the Commissioner may exercise all the powers of a Local Health Authority in any part of the State.

Interesting features of recent legislation are as follows :—(a) Act No. 70 of 1948 which gives compulsory power to control sufferers from tuberculosis; and (b) Act No. 71 of 1948, which provides that within areas declared for the purpose, all still-born infants must be submitted for post-mortem examination and provides for compulsory notification of still births to the Commissioner by the attending medical practitioner.

All the usual provisions for public health control are embodied in the Health Act including the medical and dental examination of school children, control of public buildings, inspection of food and the provision of standards thereof. The Nurses Registration Act now makes provision for the registration of nurses in each of the following branches of the nursing profession—general, midwifery, tuberculosis, infant health, mothercraft, mental, and children's.

6. **Tasmania.**—The Department of Public Health is under the jurisdiction of the Minister for Health with an Under Secretary as permanent head of the Department through whom the following medical directors are responsible for the administration of the laws and services &c. indicated :—(a) Director of Public Health, responsible for the administration of the laws relating to public health, food and drugs, places of public entertainment and cremation; and for the following services, &c. :—School Medical

Service, Maternal and Child Welfare, Venereal Disease Clinics, Analytical Laboratory, and Mothercraft Home; (b) Director of Hospital and Medical Services, responsible for the administration of the laws relating to hospitals and nurses' registration, and for the following services, &c. :—Government Medical Service, Bush Nursing Service, Institutions for the Aged and Infirm at St. John's Park and the Home for Invalids; (c) Director of Tuberculosis, responsible for the administration of the laws relating to tuberculosis, and for the management of Chest Clinics, and Sanatoria at New Town and Perth; and (d) Director of Mental Hygiene, responsible for the administration of the laws relating to mental hospitals, and for the management of Lachlan Park Hospital (Hospital for Insane) and Millbrook Psychopathic Home.

§ 2. The National Health and Medical Research Council.

In 1926 the Commonwealth Government established a Federal Health Council, in accordance with a recommendation of the Royal Commission on Health (1925), "for the purpose of securing closer co-operation between Commonwealth and State Health Authorities". This Council held sessions each year except in 1932. In 1936, the Commonwealth Government decided to create a body with wider functions and representation, and the National Health and Medical Research Council was established with the following functions :—

- To advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public and on medical research;
- To advise the Commonwealth Government as to the expenditure of money specifically appropriated as money to be spent on the advice of this Council;
- To advise the Commonwealth Government as to the expenditure of money upon medical research and as to projects of medical research generally;
- To advise Commonwealth and State Governments upon the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition.

The Council consists of the Commonwealth Director-General of Health (as Chairman), two officers of his Department, the official head of the Health Department in each State, together with representatives of the Federal Council of the British Medical Association, the Royal Australasian College of Surgeons, the Royal Australasian College of Physicians, the Australian Regional Council of the Royal College of Obstetricians and Gynaecologists, the Australian Dental Association, and (jointly) the four Australian Universities having medical schools. A prominent layman and laywoman, appointed by the Commonwealth Government, also serve on the Council.

The first session of the National Health and Medical Research Council met at Hobart in February, 1937; the twenty-sixth session met at Sydney in November, 1948.

Under the Medical Research Endowment Act 1937, the Commonwealth Government has made an annual appropriation of funds to provide assistance :—

- (a) to Departments of the Commonwealth or of a State engaged in medical research;
- (b) to Universities for the purpose of medical research;
- (c) to institutions and persons engaged in medical research;
- (d) in the training of persons in medical research.

Approved research institutions under this system now number 49. During the year 1948, grants numbered 50 in the following fields :—allergy, bacteriology, biochemistry, bio-physics, clinical, dentistry, epidemiology, neurology, neuro-physiology, nutrition, obstetrics, ophthalmology, physiology and pharmacology, and tuberculosis and virus diseases. In certain instances, equipment and apparatus have been made available by the Council; this has greatly facilitated some specialized lines of research. The wide scope of work being carried out is greatly assisted by the formation of committees which meet regularly and advise the Council in such subjects as—industrial hygiene, maternal and child welfare, nutrition, radio-active isotopes, streptomycin control and distribution, tropical physiology and hygiene, tuberculosis and the latest developments in X-ray technology and application.

The research work being done under these grants is of a high standard, many of the individual investigators enjoying international reputation. Beyond this practical achievement, the original objectives of the Council are being attained in encouraging young graduates to take up research work and in securing a continuity and permanence of medical research in Australia.

Since the cessation of hostilities, the Council has had the responsibility of selecting persons to take up fellowships awarded by the Nuffield and Rockefeller Foundations, the Carnegie Corporation and the Australian Red Cross Society.

In addition to this, the Council has set aside monies for the specific purpose of sending its fellows abroad for overseas experience and training.

§ 3. The Commonwealth Department of Health.

1. **General.**—An Order-in-Council dated 3rd March, 1921, defined various functions to be performed by the Commonwealth Department of Health in addition to Quarantine which at that time was the only specific public health power of the Commonwealth Parliament under the Commonwealth Constitution. An amendment of the Constitution in 1946 gave the Commonwealth Government power to provide a complete Health Service to the nation including medical advice and treatment. The National Health Services Act 1948 assented to on 21st December, 1948, provides for Commonwealth activity in establishing hospitals, laboratories, health centres and clinics, post-graduate training in all branches of medicine, courses of training in the Auxiliary Medical Services, research, prevention of disease and medical education. Many essential services have been developed by the Department to meet current needs and to further public health throughout Australia. In earlier issues of the Official Year Book reference has been made to several features of this development, including: The Royal Commission on National Health, 1925 (see No. 22, pp. 509–10), the International Pacific Health Conferences (see No. 22, p. 510 and No. 29, p. 334), Industrial Hygiene (see No. 18, pp. 522–55), Tropical Hygiene (see No. 22, pp. 506–7, No. 25, pp. 415–7, and No. 32, p. 226), and the Commonwealth Advisory Council on Nutrition (see No. 32, pp. 222–3). Reference to quarantine is made below (see § 4, par. 2).

2. **The Commonwealth Serum Laboratories.**—The establishment for the preparation of Jennerian vaccine situated at Royal Park, near Melbourne, formerly known as the "Calf Lymph Depot" was in 1918 greatly enlarged by the Commonwealth. The remodelled institution is designated the "Commonwealth Serum Laboratories" and is administered by the Commonwealth Department of Health. The laboratories are now installed in fully equipped buildings and a large staff is employed. At Broadmeadows, near Melbourne, a farm of 254 acres has been developed, under veterinary supervision, for the many thousands of animals required for the work of the laboratories.

The list of biological preparations produced by the laboratories has been extended until at the present time almost the whole range of these products is manufactured and Australia is practically independent of other countries in thus producing its own requirements. Penicillin is being produced in increasingly large quantities, which it is anticipated will shortly suffice for total Australian requirements. Constant research is being conducted into every relevant aspect of bacteriology and immunology and new sera and prophylactic agents are being tested as the growth of medical knowledge opens up new avenues of treatment, prevention and diagnosis. Other original and applied research relating to all aspects of public health is maintained. The laboratories serve as the national centre for the maintenance in Australia of the international standards of the Permanent Commission on Biological Standards (World Health Organization Interim Commission). For the past 25 years the production of veterinary biological products has been a feature of the work of the laboratories. In recent years an extensive development has occurred in this direction and the products are being used in greatly increased amounts in all States for the prevention or treatment of diseases in domestic animals and stock.

3. **The Commonwealth Health Laboratories.**—The fifteen health laboratories of the Department are situated at strategic points throughout Australia. They are located at Darwin, Cairns, Townsville, Rockhampton, Toowoomba, Lismore, Bendigo, Launceston,

Hobart, Port Pirie, Kalgoorlie, Broome, Tamworth, Wollongong and Albury. These laboratories were established as an essential part of the quarantine system but were also to undertake research into local health problems and to provide medical practitioners of each district with up-to-date facilities for laboratory investigation and diagnosis. It was realized that co-operation between the general practitioner with his clinical observations and knowledge of the environment of disease on the one hand, and the staff of a well-equipped laboratory on the other hand, is essential to the efficient investigation of disease and the effective operation of control measures.

From this standpoint, the laboratories have already proved their value in the determination of Weil's disease and endemic typhus in North Queensland, in the investigation of special local problems at Darwin, of undulant fever throughout Australia, of silicosis and tuberculosis at Kalgoorlie and of plumbism at Port Pirie. In these investigations close co-operation has existed with State and local health and hospital services; especially is this so in Queensland where collaboration has yielded exceptionally valuable results in differentiating the groups of fevers hitherto unclassified in that State. In this investigational work, as well as in more routine activities, the laboratories have at their disposal the full resources and technical and specialist facilities available at the Commonwealth Serum Laboratories and the Sydney School of Public Health and Tropical Medicine.

A major part of the work performed at the Kalgoorlie laboratory, since its establishment in 1925, has been the medical examination, on behalf of the State Department of Mines, of employees and applicants for employment in the metalliferous mines in Western Australia. These examinations are performed in accordance with the provisions of the State Mines Regulation Act and the Mine Workers' Relief Act, the objects of which are to provide a healthy body of men for the industry and to free the industry of, and protect the future of, those found to be suffering from serious pulmonary disease. The examinations include clinical, laboratory and radiographic investigation. By means of a mobile X-ray unit an annual tour is also made of outlying mining centres.

X-ray facilities are also provided at the Bendigo laboratory, as part of the campaign against tuberculosis, for the examination of miners and other radiographic work in the district.

4. **Commonwealth Acoustic Laboratories.**—The Department of Health established the first of the series of Acoustic Laboratories in January, 1947, in Erskine House, York-street, Sydney.

The laboratory continued and expanded the work of the Acoustic Research Laboratory which was sponsored by the National Health and Medical Research Council during the years 1942–1946 for the purpose of investigating problems of noise and difficulties of intercommunication in aircraft and tanks. With the cessation of hostilities the Acoustic Research Laboratory directed its attention to the problem of deafness in children, particularly the group whose affliction was caused by the mothers contracting rubella in the early months of pregnancy.

The taking over of the Acoustic Research Laboratory by the Department of Health was influenced by the request from the Repatriation Commission for technical assistance in the matter of the supply of hearing aids to deafened ex-servicemen. Arrangements for this purpose were completed and branch laboratories were established in all other State Capital Cities.

During the year 1948 the Acoustic Laboratories Act was passed to allow the expansion of activities on the following lines :—(1) To carry out the requirements of the Repatriation Commission for deafened ex-Service personnel and to provide a similar service for the Commonwealth Department of Social Services in respect of deafened ex-Service personnel whose disability was not caused by war service; (2) to assist the Education Departments of the States in measuring deafness, fitting aids, and maintaining hearing aid equipment for school children; (3) to act on behalf of various State and other authorities who desire to have independent tests made before assisting financially in the purchase of hearing aids for people under their care; and (4) the investigation of problems associated with noise in industry.

The laboratory in Sydney is now known as the Commonwealth Central Acoustic Laboratory and is responsible for the training of personnel for the whole Acoustic Service, the production of equipment, the calibration of hearing aids and audiometers and the technical administration of the branch laboratories.

5. **Commonwealth Bureau of Dental Standards.**—The National Health and Medical Research Council sponsored the Dental Materials Research Laboratory during the years 1939–1946, for the purpose of assisting the Defence Services, the Medical Equipment Central Committee and other Government Departments in the selection of, and purchase of, suitable dental equipment and materials. Valuable assistance was also given to Australian manufacturers of dental materials in relation to improvement of their products and the development of new materials.

Much of the work was of a routine nature and with the cessation of hostilities the National Health and Medical Research Council decided to *cease* its sponsorship but recommended that the Department of Health should take over the laboratory as it was serving a good purpose. This was done in January, 1947, and the laboratory was renamed the Commonwealth Bureau of Dental Standards and is at present situated in the grounds of the University of Melbourne.

The functions of the Bureau are as follows:—(1) Original research into dental equipment, materials, techniques and processes; (2) the development, in consultation with a representative committee of the Commonwealth Department of Health, of the Australian Dental Association and the Standards Association of Australia of specifications for dental materials and equipment; (3) regular systematic surveys of dental materials on sale to the profession in Australia, and the reporting of the results of such investigations in recognized Australian scientific journals; and (4) the provision of a consultative service and testing facilities for local manufacturers of dental materials with the view to assisting them in the improvement of existing products and the development of new materials.

6. **The School of Public Health and Tropical Medicine.**—The Commonwealth Government, under an agreement with the University of Sydney, established a School of Public Health and Tropical Medicine at the University of Sydney as from 4th March, 1930, for the purpose of training medical graduates and students in the subjects of public health and tropical medicine. The organization of the Australian Institute of Tropical Medicine at Townsville was merged in the new school, and the staff, equipment and material were transferred to Sydney.

The work of the school comprises both teaching and investigation. Courses are held for the University post-graduate diploma of public health and the diploma of tropical medicine and tropical hygiene. Lectures are given in public health and preventive medicine as prescribed for the fifth year of the medical curriculum. Other classes include students in architectural, social and school hygiene, and lay officers and nurses in the tropical services and missionaries. In addition to this work, throughout the war all the resources of the School were made available for the training of medical and hygiene officers and other ranks from all the Services of the Australian and Allied Forces.

Investigational work covers a wide field of public health and medical subjects, both in the laboratory and in the field. Field work has been carried out not only in Australia but in co-operation with the local administrations in Papua, New Guinea, Norfolk Island and Nauru. During the year initial steps to set up sections of Child Health and Occupational Disease were made and selection of suitable staff is proceeding. Further details may be found in previous issues of the Official Year Book (see No. 29, p. 334).

7. **The Australian Institute of Anatomy.**—Information concerning the Australian Institute of Anatomy at Canberra is given in previous issues of the Official Year Book (see No. 32, p. 919–21). In 1931 the Institute became an integral part of the Commonwealth Department of Health. The work of the Institute on general problems of comparative anatomy has now been concentrated on aspects of structure and function with special reference to the development of the growing child. Biochemical and biological research in this field is being developed in close association with the model kindergarten centres established by the Department in each capital city (see par. 10 below). Work in specialized

aspects of nutrition has steadily increased. The Institute now plays an important part in research and the scientific application of nutritional knowledge under Australian conditions. The background of comparative anatomy and the museums of the Institute are maintained as part of the general plan of work, and an expert zoologist is a member of the body of research workers at the Institute. See also Chapter XXVIII. "Miscellaneous".

8. **The Northern Territory Medical Service.**—As from 1st April, 1930, the Commonwealth Department of Health assumed administrative responsibility for the medical and health services of the Northern Territory, absorbing the Northern Territory Medical Service. With the growing importance of Darwin as the northern gateway to Australia and as an administrative and service centre its health services were strengthened, a new hospital at Darwin was built and the hospital at Alice Springs was enlarged.

With civilian evacuation during the Pacific war, military control of the medical services operated in the years 1942 to 1945. Civilian control was resumed by the Department during the period November, 1945 to May, 1946, starting at Alice Springs and gradually extending north to Darwin. The hospitals at Alice Springs, Tennant Creek, Katherine and Darwin, and the Health Laboratory at Darwin were re-established as civilian institutions.

An aerial medical service, operated by the Department, is based on Darwin, and comprises two Dragon aircraft and a pilot. The Flying Doctor Service of Australia has a base at Alice Springs, and the medical officers at the hospital act as the doctors for this service.

9. **National Fitness.**—Health authorities in Australia have closely followed the world-wide movement for the advancement of physical fitness and in several States active work has been proceeding over some years. In 1938, following a recommendation of the National Health and Medical Research Council, the Commonwealth Government agreed to appoint a Commonwealth Council for National Fitness, under the Commonwealth Minister for Health, to effect collaboration of Commonwealth, State and local government authorities in the movement. Meetings of this Council are held at regular intervals, at least annually. Meanwhile, active State Councils have been formed in all States. As a result of the recommendations of the central Council, the Commonwealth Government agreed to make available an annual sum of £20,000 for five years and grants were allocated to each State for purposes of organization and to each of the six Australian universities to establish lectureships in physical education. In July, 1941, a National Fitness Act was passed by the Commonwealth Parliament to ensure greater permanence to the movement, and in June, 1942, the Commonwealth grant was increased to £72,500 to include grants to State Education Departments and for the work in the Australian Capital Territory. In 1946 the total grants were extended for a further period of five years. The movement continues to develop and to gain public interest and support throughout Australia.

10. **The Pre-school Child.**—Sessions of the National Health and Medical Research Council and the reports of the Commonwealth Advisory Council on Nutrition have called attention to the need for greater effort throughout Australia directed towards the care of the growing child, especially during the pre-school period. Movements for the care of the infant and the welfare of the school child are already developed by State authorities as recorded in §§ 7 and 8 below. The Commonwealth Government felt that more could be done for the child of pre-school age, and it was decided to give a lead by making it possible to demonstrate what could be done and the practical methods which could be applied.

The Commonwealth Government therefore decided to establish in each capital city a pre-school demonstration centre, known as the Lady Gowrie Child Centre, and in order to achieve the best results in association with those who have had experience in this field it has secured the co-operation of the Federal Organization of Kindergarten Unions which is operating under the title of "The Australian Association for Pre-school Child Development". A suitable site was secured in each capital city and the necessary school structure was built. Formerly the administration of these centres was under the direction of the local Kindergarten Union and the employment of staff was made

with the approval of the Commonwealth Department of Health. Recently the local Lady Gowrie Child Centre Committees were given a greater degree of autonomy, so that while the technical supervision still rests with the Australian Association for Pre-school Child Development, the management of each centre, including staffing, is in the hands of the local Committee. This development is associated with a change in the method of financial control. An annual grant is made to each Committee towards the cost of the centre, the disbursement of these funds being at the discretion of the local Committee, subject to the general supervision of the Australian Association for Pre-school Child Development. This applies in so far as the educational side is concerned, and in this field advantage is being taken of the opportunity to try new methods and to make systematic records of observations with the object of securing reliable knowledge of the educational technique of this pre-school period.

Along with this educational practice there proceeds also the study of physiological requirements of the child and of the interaction between physical and mental health under varying conditions. The children available at these centres provide a considerable mass of human material for control and study, which is of great value in view of the importance of the study of growth and of nutrition of their age-period. Not only are routine measurements made of height, weight and other bodily data, but problems of nutrition are studied in detail. The medical work at each State centre is carried on on a uniform basis, according to a scheme formulated at, and directed from, the Australian Institute of Anatomy, Canberra, where parallel investigations on the laboratory side are being undertaken.

II. Organization for the Control of Cancer.—The persistent increase in cancer mortality has led to the development in Australia of a national organization directed towards the control of this disease. The Commonwealth Department of Health has actively participated in this movement. Since 1928 the Australian Cancer Conferences, convened by the Department, have provided an opportunity each year for those actively engaged in the campaign against the disease to meet for the discussion of problems and the determination of lines of action and further development. The tenth conference in this series met in New Zealand in February, 1939, and so marked an association which has been maintained between Australia and the Dominion since the inception of the conferences. No further conferences have been held since 1939 due to the intervention of the 1939-45 War.

A large amount of radium purchased in 1928 by the Commonwealth Government for use in treatment and research has been distributed on loan to treatment centres throughout Australia. Under the terms of this loan, treatment at well-equipped clinics is available to all requiring it, irrespective of ability to pay. This work is co-ordinated by the Department.

Close co-operation is maintained between research workers, physicists and bio-chemists and the medical men engaged in the clinical investigation and treatment of the disease, so that problems are mutually investigated and treatment is applied with the highest attainable degree of scientific accuracy.

Realizing the essential importance of accuracy in determining the quality of radiation used in the treatment of cancer and in measuring the dosage of this radiation actually delivered to the tumour, and the need for the investigation of physical problems in connexion with the utilization of X-rays and radium in the treatment of disease, the Commonwealth Department of Health in 1935 extended the work of the Commonwealth Radium Laboratory, established in 1929, to include the investigation of the physical problems of radiation therapy generally. This laboratory, known as the Commonwealth X-ray and Radium Laboratory, is situated by agreement with the University of Melbourne, within the University grounds, and is maintained, controlled, and staffed by the Commonwealth Department of Health. It is accommodated in a building specially designed for work with X-rays and radium, and is amply provided with all necessary equipment for research work, including a 500,000 volt high tension generator.

The laboratory co-operates closely with the local physical services which have been developed in the other capital cities of Australia to provide local facilities for the production of radon, for the calibration of X-ray therapy equipment, and for the measurement of radiation exposure of X-ray and radium workers.

The laboratory has continued to repair radium containers. It also undertakes investigations into physical problems arising in the use of X-ray and radium in treatment.

During the year 1948, a total of 72,528 millicuries of radon was prepared and issued from the laboratory, while 40,835 millicuries were issued by the associated centres in Sydney, Adelaide and Brisbane. The corresponding figures for 1947 were 58,848 and 39,252 millicuries respectively. The issue of radon from a few centres to serve hospitals all over the continent is a unique Australian development, and enables a very efficient use to be made of the radium available.

12. **Veterinary Hygiene and Plant Quarantine.**—In 1927 Directors were appointed to control divisions of the Commonwealth Department of Health which have been created to deal with veterinary hygiene and plant quarantine.

§ 4. Control of Infectious and Contagious Diseases.

1. **General.**—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine; Notifiable Diseases, including Venereal Diseases; and Vaccination.

2. **Quarantine.**—The Quarantine Act is administered by the Commonwealth Department of Health, and has three sections of disease control, as follows:—(i) Human quarantine which controls the movements of persons arriving from overseas until it is apparent that they are free of quarantinable disease; (ii) Animal quarantine which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports, and (iii) Plant quarantine which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds.

In regard to interstate movements of animals and plants, the Act becomes operative only if the Governor-General be of opinion that Federal action is necessary for the protection of any State or States: in general, the administration of interstate movements of animals and plants is left in the hands of the States.

The Commonwealth controls stations in each State for the purposes of quarantine of humans, animals and plants.

3. **Notifiable Diseases.**—(i) *General.* (a) *Methods of Prevention and Control.* Provision exists in the Health Acts of all the States for the observance of precautions against the spread and for the compulsory notification of infectious disease. When any such disease occurs, the local authority must at once be notified, and in some States notification must be made also to the Health Department. The duty of making this notification is generally imposed, first, on the head of the house to which the patient belongs, failing whom on the nearest relative present, and, on his default, on the person in charge of or in attendance on the patient, and, on his default, on the occupier of the building. Any medical practitioner visiting the patient is also bound to give notice.

As a rule the local authorities are required to report from time to time to the Central Board of Health in each State as to the health, cleanliness and general sanitary state of their several districts, and must report the appearance of certain diseases. Regulations are prescribed for the disinfection and cleansing of premises, and for the disinfection or destruction of bedding, clothing, or other articles which have been exposed to infection. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as small-pox and leprosy.

(b) *Diseases Notifiable and Cases Notified in each State and Territory.* The following table, which has been compiled by the Commonwealth Department of Health, shows for each State and the Australian Capital Territory the diseases notifiable in 1947 and 1948 and the number of cases notified. Diseases not notifiable in a State or Territory are indicated by an asterisk.

DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY AND NOTIFICATIONS FOR THE YEARS ENDED 31st DECEMBER, 1947 AND 1948.

Disease.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	Aust. Cap. Terr.	Aust.
YEAR 1947.									
Anchylostomiasis†	..	510	12	..	102	..	..	..	624
Anthrax ..	..	1	..	1	..	..	..	..	2
Beriberi ..	..	..	..	..	..	..	..	..	..
Bilharziasis ..	..	..	..	..	..	..	..	..	..
Cerebro-spinal Meningitis ..	65	47	36	17	30	8	..	..	203
Cholera ..	..	..	..	..	..	..	..	..	..
Coastal Fever (a) ..	..	..	8	..	..	..	..	..	8
Dengue ..	..	..	..	..	..	..	17	..	17
Diphtheria ..	761	405	457	93	363	64	7	1	2,151
Dysentery (b) ..	..	26	29	16	61	1	129	..	262
Encephalitis Lethargica ..	2	5	2	..	1	..	..	..	10
Erysipelas ..	..	..	..	68	..	..	7	..	75
Filariasis ..	..	..	..	..	..	..	..	..	2
Helminthiasis ..	..	..	2	..	..	..	..	..	..
Hydatid ..	..	20	..	..	..	..	..	..	20
Influenza ..	..	..	..	9	..	..	4	..	13
Leptosy ..	..	..	8	..	38	..	18	..	64
Malaria(c) ..	..	1,608	789	..	295	66	35	..	2,793
Measles ..	..	..	..	724	..	..	3	..	734
Plague ..	..	..	..	..	..	..	..	..	..
Polio-myelitis ..	83	126	19	55	2	1	..	2	288
Psittacosis ..	..	2	..	..	..	..	..	..	2
Puerperal Fever ..	85	3	129	36	6	3	1	..	263
Rubella ..	..	..	..	..	32	..	..	29	61
Scarlet Fever ..	1,540	1,851	474	428	143	118	..	7	4,561
Smallpox ..	..	..	..	..	..	..	..	..	..
Tetanus ..	..	9	33	..	3	..	..	..	45
Trachoma ..	..	..	..	..	..	..	..	..	..
Tuberculosis(d) ..	1,751	825	546	216	406	207	15	5	3,971
Typhoid Fever(e) ..	28	21	14	2	36	10	..	..	111
Typhus (Endemic)(f) ..	24	..	63	3	142	..	..	..	232
Undulant Fever ..	..	20	1	1	9	..	..	..	32
Weil's Disease(g) ..	1	..	8	..	..	..	..	..	8
Whooping Cough ..	..	..	..	17	..	..	..	5	22
Yellow Fever ..	..	..	..	..	..	..	..	..	..

YEAR 1948.

Anchylostomiasis†	..	247	23	..	101	..	..	..	371
Anthrax ..	..	..	..	..	..	..	..	..	..
Beriberi ..	..	..	..	..	..	..	..	..	..
Bilharziasis ..	..	..	..	..	..	..	..	..	..
Cerebro-spinal Meningitis ..	80	54	21	14	16	6	..	1	192
Cholera ..	..	..	10	..	..	..	..	..	10
Coastal Fever (a) ..	..	..	..	..	..	..	7	..	7
Dengue ..	..	..	..	..	..	..	..	..	..
Diphtheria ..	599	391	153	79	255	60	6	2	1,545
Dysentery (b) ..	..	14	41	3	51	1	121	16	247
Encephalitis Lethargica ..	..	2	1	..	4	..	..	..	8
Erysipelas ..	..	..	..	55	..	..	2	..	57
Filariasis ..	..	..	..	..	..	..	..	..	..
Helminthiasis ..	..	..	..	..	..	..	..	..	..
Hydatid ..	..	10	..	..	..	..	..	..	10
Influenza ..	..	..	..	7	..	..	144	..	151
Leptosy ..	2	..	9	..	49	..	19	..	72
Malaria(c) ..	..	84	74	..	118	..	..	..	295
Measles ..	..	..	..	9,441	..	..	1,096	65	10,602
Plague ..	..	..	..	..	..	..	..	..	..
Polio-myelitis ..	..	56	37	89	311	7	..	1	593
Psittacosis ..	91	..	..	..	..	..	..	..	..
Puerperal Fever ..	72	3	52	46	5	6	1	..	185
Rubella ..	..	..	..	..	50	..	..	18	68
Scarlet Fever ..	1,352	1,810	370	254	268	67	11	6	4,138
Smallpox ..	..	7	..	..	..	..	..	..	..
Tetanus ..	..	..	28	..	8	..	..	..	43
Trachoma ..	..	..	..	..	..	..	..	..	..
Tuberculosis(d) ..	1,711	677	452	297	353	188	19	10	3,707
Typhoid Fever(e) ..	17	32	15	2	24	..	..	..	90
Typhus (Endemic)(f) ..	12	3	64	11	87	..	..	..	177
Undulant Fever ..	3	11	1	1	5	..	..	..	21
Weil's Disease(g) ..	..	..	19	..	..	..	..	..	19
Whooping Cough ..	..	..	..	1,135	..	..	..	22	1,157
Yellow Fever ..	..	..	..	..	..	..	..	..	..

* Not notifiable. † Victorian and Western Australian cases of Hookworm were ex-service personnel infected overseas. ‡ Hydatid became notifiable in Western Australia as from 15th October, 1948.

(a) Includes "Mossman" and "Sarina" fevers. (b) Includes Amoebic and Bacillary. (c) Malaria figures for all States except Queensland and the Northern Territory represent relapse cases amongst ex-servicemen infected overseas. Queensland figures are mainly ex-service cases. (d) Includes all forms except in New South Wales and Northern Territory where only pulmonary tuberculosis is notifiable. (e) Includes Enteric and Paratyphoid fevers. (f) Cases reported include scrub, murine and tick typhus. (g) Includes Leptosperosis, Weil's and Para-Weil's Diseases.

(ii) *Venereal Diseases.* (a) *General.* The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases. Under these Acts notification has been made compulsory in every State except South Australia, where the Venereal Diseases Act has not yet been proclaimed. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals and clinics. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any infected person and the employment of an infected person in the manufacture or distribution of foodstuffs.

For several years the Commonwealth Government granted a subsidy to each of the States to assist in providing hospital treatment and administrative control of venereal diseases, but this subsidy has been discontinued. Yearly subsidies have been paid to the States to assist in coping with the special conditions created by the large numbers of people in the Armed Forces during the Pacific war.

In 1927 a Division of Tuberculosis and Venereal Disease was established in the Commonwealth Department of Health, with a medical officer as Director. This Division ceased to exist in April, 1932.

(b) *Details by States.* A statement of the preventive provisions in each State, together with certain statistical data, appeared in earlier issues of the Official Year Book (*see* No. 22, pp. 503-4).

4. **Vaccination.**—(i) *Demand for Vaccination.* There is statutory provision for compulsory vaccination in all States except New South Wales. Jennerian vaccine for vaccination against small-pox is prepared at the Commonwealth Serum Laboratories in Melbourne. There has been a considerable increase in the demand for vaccination, especially by people about to travel overseas by air, so that they may conform with the quarantine requirements of countries to which they are travelling.

(ii) *Details by States.* In earlier issues of the Official Year Book (*see* No. 22, pp. 504-5) information was given concerning the provisions regarding vaccination in each State.

§ 5. Inspection and Sale of Food and Drugs.

Public Health legislation in force in all States provides for the inspection of foods and drugs with the object of ensuring that all those goods which are sold shall be wholesome, clean and free from contamination or adulteration; and that all receptacles, places and vehicles used for their manufacture, storage or carriage shall be clean. For further particulars in this connexion, and with respect also to the sale and custody of poisons, reference should be made to § 1 State Public Health Legislation and Administration, pp. 295-9.

§ 6. Supervision of Dairies, Milk Supply, Etc.

1. **General.**—In earlier issues (*see* No. 22, p. 498), reference is made to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally.

2. **Number of Dairy Premises Registered.**—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cows in milk thereon. In some States registration is compulsory within certain proclaimed areas only.

DAIRY PREMISES REGISTERED, AND COWS IN MILK THEREON, 1948.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust. (a)	Tasmania.
Premises registered ..	17,513	25,783	22,500	12,471	482	(b) 7,297
Cows in milk thereon..	592,320	669,976	c 647,100	129,137	23,961	(d)

(a) Dairy farms registered with the Milk Board for milk for Metropolitan Area and Country towns.
 (b) March, 1948. (c) Estimated. (d) Not available.

§ 7. Medical Inspection of School Children.

1. **General.**—Medical inspection of school children is carried out in all the States and the Australian Capital Territory. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental and ocular defects.

2. **New South Wales.**—A complete system of medical inspection of school children is carried out by the School Medical Service which passed from the control of the Minister for Education to that of the Minister for Health as from 1st July, 1946. Medical inspection was continued as formerly, viz., in the metropolitan area, full medical examination of all children in first and fifth classes, and review of children in other classes who have been found defective in previous years, and, in country districts, the full medical examination of every child two or three times during the usual period of school attendance (6–15 years). Parents are notified of the defects found, and urged to have them treated. In the metropolitan area these notices are reinforced by “follow-up” work of school nurses, who also arrange hospital and clinic treatment in many cases.

During 1948 resignations and new appointments resulted by the end of the year in a staff of 21 medical officers (including the Director, School Medicine Service, the 3 psychiatrists of the Child Guidance Clinics and the Area School Medical Officer, Wagga), 4 psychologists, 13 school nurses, 4 social workers and a speech therapist. The School Dental Service was incorporated as a part of the newly created division of dental services.

Special attention is paid to the supervision of the health of high school pupils, both girls and boys, and medical inspection is carried out annually in high schools in the metropolitan area, as well as certain country schools.

Every student, before entering a Teachers' College, is medically examined, and any defects found must be remedied before final acceptance. Health supervision is maintained at these Colleges by women medical officers, who give courses of lectures on hygiene and physiology.

The Child Guidance Clinics examine free of charge children referred by school medical officers, teachers, officers of the Child Welfare Department and various outside bodies. Boys coming before the Children's Court were examined at the Clinic at the Metropolitan Boys' Shelter attached to the Court and at Yasmarr Hostel for Boys.

Similar examinations are made in the case of girl delinquents.

The medical examination of certain children under the jurisdiction of the Child Welfare Department and the Widows' Pensions Branch is also carried out by medical officers of this service.

The following summary furnishes particulars of children medically examined in schools in 1948:—

Number fully examined (routine inspection)	..	..	84,297
Number reviewed	..	..	24,946
Of those fully examined—percentage notified for defects, medical and/or dental.	..	..	39.10 per cent.

These figures do not include record of the medical examination and health supervision of children (1) in residence at the Glenfield Special School for backward children, and (2) attending the Department's Nursery Schools.

The School Medical Service carries out regular and/or periodical investigations into problems affecting the health of children, and special investigations into outbreaks of infectious diseases occurring in schools. The sanitary condition of school buildings is also inspected. One medical officer attached to this service was included on the panel of lecturers to parents' groups on sex education of children.

The foregoing statement does not include record of the numerous medical examinations of teachers, and other Departmental work of a medical nature, done by the School Medical Service.

The cost of this service, excluding administration charges, for the year ended 30th June, 1948, was £44,160.

3. **Victoria.**—Medical inspection of school children was established in 1909, one of the objectives of the system being to have each child medically examined once every three years in its school life.

At the medical inspection every child is first weighed and measured, tested for vision and hearing, then undressed to the waist and medically examined as for life assurance, but with a fuller investigation of many hygienic factors, which at that age greatly influence the health and growth of the child. Opportunity is also taken to teach the child healthy habits and how to correct faults, and get its co-operation for the remedying of defects found. School nurses employed by the Department are devoted to "follow-up" work, i.e., visiting the homes and obtaining treatment for children found defective by the school medical officers. Owing to the smallness of the staff their work is confined to the metropolitan area. The school nurse provides the liaison between the child, parent, teacher and appropriate medical or hospital services. Special attention is given to mentally and physically handicapped children. Retardants attending "special" schools and "opportunity" grades are examined annually. Those with defective eyesight ineligible for admission to the Blind Institute attend a "partially sighted" class and are kept under constant supervision. Others with minor postural defects attend a "remedial" gymnasium where special exercises are given under medical attention.

Triennial visits to State Schools within ten miles of Melbourne are fairly well maintained, but it has not been possible to visit more than a few of the registered and institutional schools. It has not been practicable to extend school medical services to country and rural districts. A limited number of metropolitan (industrial areas) and rural schools are covered by the School Dental Service. Owing to staff shortages, it has not been possible to maintain the desired policy of providing dental treatment at regular yearly intervals, with initial treatment at a maximum age of eight years. Children from metropolitan schools attend the School Dental Centre, South Melbourne, and are transported to and from the centre by motor bus hired by the department. It has been the aim to staff and maintain two dental vans on regular country itineraries and to give preference to children resident in institutions situated in the metropolitan and urban areas.

During the year ended 30th June, 1948, 17,526 children and 2,457 teachers were medically examined, and 13,282 children received dental treatment involving 17,694 visits with 25,662 extractions, 15,704 fillings and 6,431 other treatments.

The cost of the School Medical and Dental Services for 1947-48 was £22,327.

4. **Queensland.**—The School Health Services Branch, under the direction of the Chief Medical Officer, consists of three sections known as the Medical, Dental and Nursing Sections.

Medical inspection of schools and school children is carried out by one full-time and one part-time officer under the general direction of the Chief Medical Officer, School Health Services. These officers, as far as possible, examine children for cardiac and pulmonary conditions, and in addition make a thorough examination of all children referred to them by the school nurses.

The nurses now number 20. Each nurse is assigned a group of schools and is instructed to make a list at each school of those children who should be seen by the medical inspector at his next visit. She supervises the sanitation, cleanliness and ventilation of the school and notifies the head teacher of all infectious or verminous children or those suffering from impetigo, scabies, etc., who are then excluded. During 1947-48, school nurses examined 74,206 children. In the metropolitan area the nurses examine the teeth and report all eligible carious cases to the Dental Hospital for treatment.

The Department now has in its employ a staff of 19 dentists, and one part-time dental inspector. These officers are each assigned a district, which is not changed for three years unless for reasons which the Chief Medical Officer, on the recommendation of the Chief Dental Inspector, considers advisable. During 1947-48, 29,520 children were examined; 20,601 extractions were performed; and there were 67,875 fillings and 24,747 other treatments.

At the Wilson Ophthalmic School Hostel children suffering from trachoma are treated and educated. They are admitted from time to time on the recommendation of the part-time Ophthalmic Officer. Beneficial results have already been obtained. The Institution is situated at Eildon Hill, Windsor, and is fully equipped to treat all types of eye cases.

The work of Hookworm Control (the dealing with ankylostomiasis duodenale and necator Americanus infestation) throughout the State is under the control of the Director-General of Medical Services and his deputy. This activity has resulted in a marked reduction of the incidence of this dangerous menace on the northern coastal belt. Five sisters of the School Health Services are seconded for hookworm duty. The personnel consists of a microscopist, a health inspector and two trained sisters.

In order to give the same medical and dental facilities to the children of the back country as are obtainable by city dwellers, three Rail Dental Clinics equipped on the most modern lines have been constructed. Another one is in course of construction and will shortly be in commission. A motor car is carried on a railway wagon attached to each clinic for use at each stopping place to visit the surrounding villages served by the rail centre.

This service cost £51,945 in 1947-48.

5. South Australia.—The system of medical inspection in force requires the examination of all children attending both primary and secondary schools. As a rule they are examined three times during their primary course in Grades I., IV. and VII., and twice during their secondary course in the 2nd and 4th years. Country schools are not visited annually because of staff shortage, but approximately every three or four years. On these visits all the children are examined. Reports are furnished to the parents of any remediable defects found during these examinations. The medical inspectors meet the parents after the examination of the children and give an address on the prevention and treatment of the conditions which were found during the inspection. After these lectures the parents are given an opportunity to ask questions regarding their children. When there is an epidemic or a threatened epidemic in a district, similar lectures are given and special visits paid to all the schools in that locality. All students are examined before they enter the Teachers' College and before they begin teaching. Medical and physiological tests are conducted four times during the course (two years) on all candidates taking the Diploma of Physical Education. Courses of lectures in Hygiene and in First Aid are given to all College students.

The medical staff consists of a principal medical officer, 3 full-time and 1 part-time medical inspectors and 5 trained nurses. Two dentists, 2 dental assistants and a speech therapist are attached to the Medical Branch. The speech therapist examines children with defective speech, ascertains the nature of the defect and teaches the child how to overcome it.

During 1948, 21,236 children were examined by medical inspectors; of these, 525 required notices for defective vision, 108 for defective hearing, and 936 for tonsils and adenoids.

The following table shows the percentages of primary school children who were wearing spectacles in 1947 and 1948:—

Year.		Grade 1.	Grade 2.	Grade 3.	Grade 4.	Grade 5.	Grade 6.	Grade 7.
Boys.								
1947	..	1.29	1.66	2.76	3.07	4.54	4.61	2.42
1948	..	1.50	2.20	1.70	3.60	4.10	4.20	4.50
GIRLS.								
1947	..	1.44	2.36	3.30	3.29	5.16	5.34	7.32
1948	..	1.80	1.80	2.90	3.60	6.50	6.00	4.80

The Psychology Branch consists of a psychologist, assistant psychologist, vocational guidance officer, aptitude testing officer, employment officer, social worker and advisory teacher of opportunity classes. The work of the Branch may be divided into three sections—clinical, educational and vocational.

Clinical. The clinical work involves examining difficult children of many types, including such problems as backwardness, retardation, behaviour, truancy, delinquency, etc. In addition the parents of all children examined are always interviewed and their co-operation is sought.

Educational. In addition to supervising 36 opportunity and special classes for children backward in school work, the Branch advises on questions of placement and types of education for ordinary children in schools.

Vocational. The vocational guidance officer tests and advises all children about to leave school.

The Branch also undertakes lectures to students of the Teachers' College as well as to other interested organizations such as mothers' clubs.

The cost of these services in 1947-48 was £10,760.

6. **Western Australia.**—Under the Public Health Act 1911-1935 the medical officers appointed by the local authorities became medical officers of schools and of school children. The principle aimed at is—

- (a) in the metropolitan area, that each child shall be examined three times during its school life—
 - (i) when it enters school between 5 and 6 years,
 - (ii) in its eighth year, and
 - (iii) between the ages of 12 and 13 years;
- (b) in the country, that the child is examined twice during its school life, or more often if it is possible to arrange such medical examinations.

In the Health Department there are 2 full-time and 1 part-time medical officers for schools and 4 school nurses are employed. One of the medical officers is employed full-time in the country, and one full-time officer and one half-time officer are employed in the metropolitan area. One school nurse is employed in the country in special work connected with eye epidemics, etc. The other three nurses are employed in the metropolitan area. During 1948, 23,237 children were examined (metropolitan, 13,272, and country, 9,965 of whom 11,670 were boys and 11,567 girls). There were 285 schools visited, comprising—metropolitan, 75 State schools and 32 convents, and country, 149 State schools and 29 convents. During 1948 the 4 full-time dental officers employed visited 16 metropolitan and 45 country schools and gave attention to 2,957 children, of whom 1,792 had their parents' consent.

The cost of this service for 1947-48 was £8,737.

7. *Tasmania*.—During the year 1947-48 the School Medical Service occupied the full-time service of three medical officers and the part-time service of 18 government medical officers. Nine school nurses were engaged full-time on this work in association with the doctors and two nurses were engaged part-time.

Two dental clinics, one each in Hobart and Launceston, attended to the needs of children in those centres, and one mobile dental clinic was in operation in the north-western part of the State.

The number of children examined during 1948 by medical inspectors was 15,903, of whom 8,447 had defects. First visits to dentists numbered 6,774 and repeat visits 5,941.

The cost of medical and dental services for the year ended June, 1948, was £11,748.

8. *Australian Capital Territory*.—By arrangement, education facilities are provided by the Education Department of New South Wales. The Commonwealth Department of Health, however, took over from the State in 1930 the medical inspection of school children and carried out examinations of entrants and those leaving during 1930.

Subsequent to 1931, examinations of entrants and those leaving the primary schools have taken place. During 1937 this examination was supplemented by examinations of all pupils of all rural schools (including Duntroon and Molonglo). No examinations were made in 1942. Since 1943 all primary pupils of Government schools in the Territory have been medically examined annually. During 1948 a total of 1,392 children were examined, comprising 729 boys and 663 girls. Dental defects numbered 611 (43.9 per cent.); 82 (6 per cent.) children were notified to seek treatment for tonsils and adenoids; 25 cases (1.9 per cent.) were reported for defective vision. Defective hearing represented 28 notifications or 2 per cent. Chest deformities totalled 92 or 6.6 per cent., whilst 71 children (5.1 per cent.) were 10 per cent. or more under weight for their height and age.

§ 8. Supervision and Care of Infant Life.

1. *General*.—The number of infantile deaths and the rate of infantile mortality for the last five years are given in the following table, which shows that during the period 1944 to 1948 no less than 24,096 children died in Australia (excluding Territories, before reaching their first birthday. Further information regarding infantile mortality will be found in Chapter XIV. "Vital Statistics"—

INFANTILE DEATHS AND DEATH RATES.

State.	Metropolitan.					Remainder of State.				
	1944.	1945.	1946.	1947.	1948.	1944.	1945.	1946.	1947.	1948.
NUMBER OF INFANTILE DEATHS.										
New South Wales	749	813	786	856	810	1,080	1,076	1,246	1,213	1,221
Victoria ..	705	637	730	725	605	553	518	538	520	498
Queensland ..	258	270	251	353	293	510	525	540	521	486
South Australia ..	211	224	256	192	256	176	170	172	204	216
Western Australia	173	146	160	181	150	181	169	216	217	181
Tasmania ..	57	28	58	66	46	142	131	149	129	147
Australia(a) ..	2,153	2,118	2,241	2,373	2,160	2,642	2,589	2,861	2,804	2,755
RATE OF INFANTILE MORTALITY.(b)										
New South Wales	26.45	27.56	24.74	26.82	26.96	34.51	33.46	35.12	32.36	33.00
Victoria ..	31.00	26.87	27.07	26.82	23.77	33.29	29.61	27.27	25.57	24.12
Queensland ..	30.18	28.18	25.65	34.59	29.04	31.93	30.65	31.33	28.70	28.47
South Australia ..	28.53	28.11	27.89	20.73	28.79	29.76	28.03	25.93	28.91	30.90
Western Australia	29.27	25.16	25.01	26.99	23.59	36.49	34.72	37.84	35.18	28.78
Tasmania ..	39.31	17.85	29.59	31.52	22.32	37.87	31.07	39.49	25.56	29.89
Australia(a) ..	28.95	27.11	26.04	27.21	26.06	33.65	31.60	31.90	29.75	29.60

(a) Excludes Territories.

(b) Number of deaths under one year per 1,000 births registered.

During recent years greater attention has been paid to the fact that the health of the community depends largely on pre-natal as well as after-care in the case of mothers and infants. Government and private organizations, therefore, provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health centres, baby clinics, creches, visits by qualified midwifery nurses, and special attention to the milk supply, etc.

2. **Government Activities.**—In all the States acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded out to its mother or near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children. (*See also* in this connexion Chapter IX. "Welfare Services".) Under the provisions of the Maternity Allowances Part V. of the Social Services Consolidation Act 1947-1949 from 1st July, 1947 a sum of £15 is payable to the mother in respect of each confinement at which a living or viable child is born. Where there are one or two other children under 16 the amount payable is £16, and where there are three or more other children under 16 the amount payable is £17 10s. Where more than one child is born at a birth the amount of the allowance is increased by £5 in respect of each additional child born at that birth. Detailed particulars regarding Maternity Allowances are given in Chapter IX. "Welfare Services."

3. **Nursing Activities.**—(i) *General.* In several of the States the Government maintains institutions which provide treatment for mothers and children, and, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *Details by States.* In earlier issues of the Official Year Book (*see* No. 22, pp. 515-6) information may be found concerning the activities of institutions in each State.

(iii) *Summary.* The following table gives particulars of the activities of Baby Health Centres and Bush Nursing Associations:—

BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS, 1948.

Heading.	N.S.W.	Victoria. (a)	Qld. (a)	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Baby Health Centres—								
Metropolitan .. No.	74	114	43	63	16	12	..	322
Urban-Provincial and Rural .. No.	196 (b)	257	144	134	22 (c)	53	9	815
Total .. No.	270	371	187	197	38	65	9	1,137
Attendances at Centres								
Visits paid by Nurses	No. 1,066,489	989,490	396,380	254,311	165,689	113,824	15,225	3,001,408
Bush Nursing Associations	No. 10,335	87,446	22,875	33,283	17,507	35,977	2,220	209,643
—Number of Centres ..	26	77	10	31	5	24	..	173

(a) Year ended 30th June, 1948.

(b) Includes five mobile units.

(c) Includes four mobile units.

The number of attendances at the Baby Health Centres has increased very considerably in recent years. The following are the figures for the years 1939 to 1947:—1939, 1,869,770; 1940, 2,035,299; 1941, 2,128,961; 1942, 2,240,294; 1943, 2,327,279; 1944, 2,677,030; 1945, 2,927,764; 1946, 2,816,586; and 1947, 3,048,498.

§ 9. Hospital Benefits Act.

Under the Hospital Benefits Act 1945-1948 the Commonwealth has entered into agreements with the States to pay to the States hospital benefits at an agreed rate for each bed occupied by a qualified person in a public ward in a public hospital, provided that the States abolish the means test for admission into public wards and cease charging fees to qualified persons admitted thereto. The benefit rate for public wards, which was

six shillings per day until 30th June, 1948, was increased to eight shillings per day from 1st July, 1948. For dates of operation and payments made in the several States *see* page 318.

The agreements provide for the Commonwealth to pay benefits towards the cost of treatment of qualified persons occupying beds in non-public wards in public hospitals, and for the State Governments to reduce the hospital fees by the equivalent of the benefit rate, thus relieving qualified persons of fees to this extent. The benefit rate for non-public wards which was six shillings per day until 31st October, 1948, was increased to eight shillings per day from 1st November, 1948.

Private hospitals are entitled to claim benefits for beds occupied by qualified patients. These hospitals must be approved by a joint committee of Commonwealth and State Health authorities before payment of benefit is made. The hospitals are required to reduce each qualified patient's account by the amount of the benefit payable by the Commonwealth. The benefit rate for private hospitals which was six shillings per day until 31st October, 1948, was increased to eight shillings per day from 1st November, 1948.

Hospital benefits are payable also to or in respect of any person who whilst temporarily absent from Australia has been a qualified patient in a hospital in any country outside Australia. The benefit rate for persons temporarily absent from Australia which was six shillings (Australian currency) per day until 31st October, 1948, was increased to eight shillings (Australian currency) per day from 1st November, 1948. Arrangements have been made for these benefits to be paid in several countries overseas where Commonwealth Officers are established. Any claims not dealt with overseas received attention in Australia.

The Commonwealth and States have agreed to form a National Hospital Council of Commonwealth and State representatives, the functions of which will be to advise the Commonwealth and State Governments on any hospital matters referred to it by the Commonwealth or State Governments.

§ 10. Mental Institution Benefits Act.

The Mental Institution Benefits Act was assented to on 17th December, 1948. It authorizes the execution, on behalf of the Commonwealth, of agreements with all or any of the States, relating to the provision of mental institution benefits.

These agreements will provide for the Commonwealth to pay to the States in respect of qualified persons in mental institutions benefits at an agreed rate per patient-day and for the States to ensure that no means test is imposed on and that no fees are charged to or in respect of qualified persons.

§ 11. Tuberculosis Act.

With the exception of two sections, this Act came into operation when it received the Royal Assent on 25th November, 1948.

Sections 3 and 9 of this Act do not come into operation till a day to be fixed by proclamation. Section 3 refers to the repeal of the Tuberculosis Acts of 1945 and 1946 and Section 9 concerns allowances payable to sufferers from tuberculosis and their dependants.

Section 5 provides for an arrangement to be entered into between the Commonwealth and a State whereby the Commonwealth undertakes to provide—(1) Capital expenditure by the State on or after the 1st July, 1948, in the provision by the State of land and buildings for use in the diagnosis, treatment and control of tuberculosis, and in the erection and improvement of buildings and the provision of furnishings, equipment and plant for such use; and (2) the net maintenance expenditure by the State in any financial year after the year which ended on the 30th June, 1948, in relation to the diagnosis, treatment and control of tuberculosis, to an extent not exceeding the amount by which that expenditure is in excess of the net maintenance expenditure in relation to the diagnosis, treatment and control of tuberculosis incurred by the State during that last-mentioned year.

Any such expenditure shall be subject to the approval of the Minister before that expenditure is re-imbursed to the State by the Commonwealth.

Any arrangement entered into under this section shall provide—(a) that any assets acquired by the State, the cost or part of the cost of which has been re-imbursed to the State under the arrangement, shall not, without the approval of the Minister, be used otherwise than for the diagnosis, treatment and control of tuberculosis; and (b) for the indemnification of the Commonwealth—(i) against payment by way of compensation for property, the cost of which is being re-imbursed to the State by the Commonwealth under the arrangement in the event of the acquisition of that property by the Commonwealth; and (ii) where the cost of the property was re-imbursed in part to the State by the Commonwealth under the arrangement—against payment by way of compensation proportionate to the cost so re-imbursed to the State in the event of the acquisition of the property by the Commonwealth.

In Section 6 the powers of the Director-General are defined. Subject to the direction of the Minister he can establish or take over and conduct hospitals, sanatoria, laboratories, diagnostic centres, after-care and other units and clinics for the diagnosis, treatment and control of tuberculosis. He can arrange for the provision of scholarships for post-graduate study and can assist and provide for research.

The functions of any Advisory Council are described in Section 8. This Council, under the chairmanship of the Director-General, will advise the Minister on such matters as the measures to be taken for the prevention, diagnosis, treatment and control of tuberculosis; on standards of equipment, training of personnel, hospitals and sanatoria and the after-care of sufferers.

Realizing that it is essential to provide economic security, adequate nutrition and good living conditions for sufferers from tuberculosis and their dependants, the Government provides special allowances. The purposes of these allowances are—(a) to encourage sufferers to refrain from working and undergo treatment; (b) to minimize the spread of tuberculosis; (c) to promote treatment, after-care and rehabilitation; and (d) to provide an adequate level of nutrition and living conditions for the dependants.

All expenditure under this Act other than—(a) payments for the re-imbusement of a State in respect of expenditure of a capital nature; (b) payments for the re-imbusement of a State in respect of administrative expenses in the control of tuberculosis; and (c) payments under Section 8 dealing with the Advisory Council shall be made out of the Trust Account established under the National Welfare Fund Act 1943-1945 and known as the National Welfare Fund.

All expenditure by the Commonwealth referred to in paragraphs (a), (b) and (c) above shall be made out of moneys from time to time appropriated by the Parliament for the purpose.

§ 12. Pharmaceutical Benefits Act.

A Pharmaceutical Benefits Act passed all stages of the Commonwealth Parliament in March, 1944 and was amended in September, 1945. This Act was the subject of a High Court action, as a result of which the Government sought by means of a referendum of the people the constitutional power necessary to implement the Act. For further information on legal and constitutional action in this matter, *see* Chapter III.—General Government, pages 83 and 84. This power having been granted, a further Pharmaceutical Benefits Act, which repealed the Acts of 1944 and 1945, was assented to on 12th June, 1947. This Act embodies a scheme for providing pharmaceutical benefits to all persons ordinarily resident in Australia. The benefits to be provided are contained in a Commonwealth Pharmaceutical Formulary, which is subject to periodic revision by a Formulary Committee comprised of members of the medical and pharmaceutical professions. Benefits are supplied without cost to the person receiving the benefit, payment being made by the Commonwealth to authorized suppliers from the National Welfare Fund. Special arrangements exist for supplying benefits or their equivalent to persons residing in isolated areas. These pharmaceutical benefits were first made available to the public on 1st June, 1948.

B. INSTITUTIONS.

§ 1. General.

In Australia institutions related to public health may be classified in three groups: (a) State; (b) public; and (c) private. To the first group belong those institutions wholly provided for by the State, such as the principal mental hospitals in the various States and the Government and leased hospitals in Western Australia. To the second group belong public institutions of two kinds, namely:—(i) those partially subsidized by the State or by State endowments for maintenance, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the first of these two kinds belong such institutions as the principal metropolitan hospitals; in the second are included institutions established and endowed by individuals for the benefit of the needy generally. All institutions of a private character are included in the third group. A more or less accurate statistical account is possible in classes (a) and (b), but in regard to (c) general tabulation is, for obvious reasons, impossible. Owing to differences in the dates of collection and tabulation it is impossible to bring statistics of some charitable institutions to a common year.

§ 2. Public Hospitals (other than Mental Hospitals).

1. *General*.—All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are hospitals for infectious diseases, tubercular patients, women, children, incurables, etc.

The particulars given herein refer to public hospitals at the latest available date and include all institutions affording hospital relief, whether general or special, with the exception of mental hospitals, repatriation hospitals and private hospitals conducted commercially. The particulars for New South Wales in the following tables relate to hospitals operating under the control of the Hospitals Commission.

2. *Principal Hospitals in each State*.—In earlier issues of the Official Year Book (*see* No. 22, pp. 481–2) particulars respecting staff, accommodation, etc., of each of the principal hospitals were given.

3. Number, Staff and Accommodation, 1947-48.—Details regarding the number of hospitals, staffs and accommodation for the year 1947-48 are given in the following table :—

PUBLIC HOSPITALS : NUMBER, STAFF AND ACCOMMODATION, 1947-48.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Number of Hospitals ..	238	85	121	59	85	23	1	612
Medical Staff—								
Honorary	2,234	1,061	119	301	169	105	14	4,003
Salaried	479	314	341	104	40	53	2	1,333
Total	2,713	1,375	460	405	209	158	16	5,336
Nursing Staff	7,869	4,593	3,879	1,579	1,497	666	70	20,153
Accommodation—								
Number of beds and cots	17,580	9,498	7,494	3,288	3,475	1,954	184	43,473

The figures for accommodation shown in the table above include particulars, where available, of a considerable number of beds and cots for certain classes of cases in out-door or verandah sleeping places.

4. In-Patients Treated.—The following table furnishes particulars of in-patients treated. (Newborn are excluded.)

PUBLIC HOSPITALS : IN-PATIENTS TREATED, 1947-48.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Inmates at beginning of year—								
Males	5,341	2,443	2,673	978	1,087	500	44	13,066
Females	6,024	2,856	2,067	1,192	1,031	707	60	15,437
Total	11,965	5,299	5,640	2,170	2,118	1,207	104	28,503
Admissions and Re-admissions during year—								
Males	127,874	41,142	70,806	21,179	27,715	12,038	1,641	302,395
Females	177,656	55,059	80,233	27,191	28,397	18,334	2,268	389,058
Total	305,510	96,201	151,039	48,310	56,112	30,372	3,909	691,453
Total in-patients treated—								
Males	133,215	43,585	73,479	22,157	28,802	12,538	1,685	315,461
Females	184,260	57,915	83,200	28,323	29,428	19,041	2,328	404,495
Total	317,475	101,500	156,679	50,480	58,230	31,579	4,013	719,956
Discharges—								
Males	121,822	38,225	67,782	19,888	26,490	11,557	1,585	287,349
Females	172,712	53,048	78,236	26,003	27,656	17,904	2,230	377,879
Total	294,534	91,273	146,018	45,981	54,146	29,461	3,815	665,228
Deaths—								
Males	5,927	2,912	2,849	1,305	1,147	529	41	14,710
Females	4,331	2,044	1,800	978	664	407	22	10,336
Total	10,258	4,956	4,739	2,283	1,811	936	63	25,046
Inmates at end of year—								
Males	5,466	2,448	2,848	964	1,165	452	59	13,402
Females	7,217	2,823	3,074	1,252	1,108	730	70	16,280
Total	12,683	5,271	5,922	2,216	2,273	1,182	135	29,682
Average Daily Number Resident	12,206	5,118	5,574	2,192	2,148	1,200	116	28,554

In addition to those admitted to the institutions there are large numbers of out-patients. During 1947-48 there were 823,084 out-patients treated in New South Wales, 342,136 in Victoria, 387,269 in Queensland, 81,682 in South Australia, 88,317 (estimated) in Western Australia, 45,846 (estimated) in Tasmania and 4,429 in the Australian Capital Territory, making a total for Australia of 1,772,763.

5. **Revenue and Expenditure.**—Details of the revenue and expenditure for the year 1947-48 are shown in the next table. The revenue includes the Commonwealth Hospital Benefit Scheme which operated in Victoria, Queensland, Western Australia and Tasmania from 1st January, 1946, in South Australia from 1st February, 1946, and in New South Wales and the Australian Capital Territory from 1st July, 1946.

PUBLIC HOSPITALS: REVENUE AND EXPENDITURE, 1947-48.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Revenue—								
Government Aid ..	4,804,972	1,984,072	2,307,923	690,821	956,812	398,455	51,597	11,194,652
Commonwealth Hospital Benefits ..	(a) 586,867	529,437	510,708	189,087	232,392	92,719	12,355	2,153,565
Municipal Aid ..	(b)	82,572	..	28,811	664	..	..	112,047
Public Subscriptions, Legacies, etc. ..	176,809	704,437	5,564	81,153	39,319	5,962	9	1,013,753
Fees ..	1,133,863	673,290	220,326	141,867	102,365	72,921	7,475	2,352,107
Other ..	173,768	180,576	67,035	106,199	17,220	19,558	61	566,417
Total 1947-48 ..	6,876,279	4,154,384	3,111,556	1,237,938	1,351,272	589,615	71,497	17,392,541
1946-47 ..	5,070,759	3,734,442	2,455,963	1,066,731	1,072,371	486,698	56,988	13,943,952
Expenditure—								
Salaries and Wages	4,278,501	1,911,867	1,639,956	640,050	539,537	352,958	33,775	9,426,644
Upkeep and Repair of Buildings and Grounds ..	236,568	114,052	73,596	71,732	16,927	12,077	2,305	527,257
All Other Ordinary Capital (c) ..	2,413,290	1,561,326	1,375,742	499,876	410,218	224,665	23,171	6,508,288
	(d)	558,686	..	44,149	378,446	..	12,076	(e) 993,357
Total 1947-48 ..	6,928,359	4,175,931	3,089,294	1,255,807	1,345,128	589,700	71,327	17,455,546
1946-47 ..	5,264,499	3,504,538	2,468,308	1,064,182	1,057,234	483,830	56,922	13,899,513

(a) Portion only of amount allocated to State Hospitals.

(b) Included in "Other".

(c) Includes such items as Purchases of Land, Cost of New Buildings and Additions to Buildings.

(d) Not available. (e) Incomplete.

6. **Summary, 1938-39 and 1944-45 to 1947-48.**—A summary for the years 1938-39 and 1944-45 to 1947-48 of the number of hospitals in Australia, medical and nursing staffs, beds, admissions, in-patients treated, out-patients, deaths, average daily number resident, revenue, and expenditure is given in the following table. The figures relate to both general and special hospitals.

PUBLIC HOSPITALS: AUSTRALIA.

Particulars.		1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
Institutions ..	No.	563	571	586	604	612
Medical Staff ..	"	4,059	4,183	4,618	5,199	5,336
Nursing Staff ..	"	13,582	16,703	17,225	18,411	20,153
Beds and cots ..	"	35,711	39,811	42,286	42,001	43,473
Admissions during year ..	"	527,055	624,651	640,446	674,957	691,453
Total indoor cases treated						
	No.	552,951	652,144	667,927	703,488	719,956
Out-patients (cases) (a) ..	"	1,272,147	1,355,069	1,426,821	1,631,018	1,772,763
Deaths ..	"	23,372	24,245	25,043	24,536	25,046
Average daily resident ..	"	25,608	28,480	28,530	28,216	28,554
Revenue ..	£	7,106,642	10,443,726	11,865,140	13,943,952	17,392,541
Expenditure ..	£	6,351,955	9,497,344	11,371,348	13,899,513	17,455,546

(a) Estimates for South Australia, Western Australia and Tasmania.

§ 3. Leper Hospitals.

Isolation hospitals for the care and treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane, and Fantome Island, North Queensland); Western Australia (Derby); and the Northern Territory (Channel Island, near Darwin). At the end of 1948 there were 18 cases in residence at Little Bay, 55 at Peel Island, 77 at Fantome Island, 248 at Derby, 85 at Channel Island, and one isolated case at Wooroloo, Western Australia. Of the 484 cases, 373 were full-blood aborigines, 40 half-caste aborigines, 5 Asiatics and 66 Europeans.

§ 4. Mental Hospitals.

1. **General.**—The methods of compiling statistics of insanity are fairly uniform throughout the States, but there is an element of uncertainty as to possible differences in diagnosis in the early stages of the disease. The figures for the States cannot be brought to a common year; consequently the following particulars relate to a combination of calendar and financial years. Licensed houses are included in all particulars excepting revenue and expenditure for New South Wales. The figures exclude those of reception houses and observation wards in gaols. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian hospitals.

2. **Hospitals, Staff, etc., 1947-48.**—Particulars regarding the number of institutions, the medical and nursing staffs, and accommodation are given in the following table for the year 1947-48 :—

MENTAL HOSPITALS : NUMBER, STAFF, ACCOMMODATION, 1947-48.(a)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of Institutions ..	13	9	5	2	4	1	34
Medical Staff—							
Males	34	40	10	7	5	2	98
Females	8	..	..	1	..	1	10
Total	42	40	10	8	5	3	108
Nursing Staff and Attendants—							
Males	912	558	489	187	162	88	2,396
Females	956	376	193	136	72	69	1,802
Total	1,868	934	682	323	234	157	4,198
Accommodation—							
Number of beds and cots	12,080	6,847	3,889	2,162	1,497	744	27,219]

(a) The figures relate to years ended as follows :—New South Wales, Queensland, South Australia and Tasmania—30th June, 1948; Victoria and Western Australia—31st December, 1947.

3. **Patients, 1947-48.**—Information regarding patients treated, deaths, etc., for 1947-48 is given in the following table :—

MENTAL HOSPITALS : PATIENTS, DEATHS, ETC. 1947-48.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of distinct persons treated during year (b)—							
Males	6,605	3,673	2,488	1,216	983	417	15,382
Females	6,930	4,220	2,238	1,221	662	453	15,724
Total	13,535	7,893	4,726	2,437	1,645	870	31,106

(a) See footnote (a) to previous table.

(b) Excludes transfers to other institutions.

MENTAL HOSPITALS: PATIENTS, DEATHS, ETC., 1947-48 (a)—*continued.*

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of patients on books at beginning of year—							
Males	5,854	3,290	2,094	1,047	881	312	13,478
Females	5,980	3,747	1,839	1,060	590	351	13,567
Total	11,834	7,037	3,933	2,107	1,471	663	27,045
Admissions and re-admissions excluding absconders retaken and transfers from other institutions—							
Males	751	383	394	169	102	105	1,904
Females	950	473	399	161	72	102	2,157
Total	1,701	856	793	330	174	207	4,061
Discharges (including absconders not retaken)—							
Males	349	190	227	39	33	88	926
Females	472	202	233	44	17	75	1,043
Total	821	392	460	83	50	163	1,969
Deaths—							
Males	433	214	145	97	51	29	969
Females	445	235	113	92	39	30	954
Total	878	449	258	189	90	59	1,923
Number of patients on books at end of year—							
Males	5,823	3,269	2,116	1,080	899	300	134,87
Females	6,013	3,783	1,892	1,085	606	348	13,727
Total	11,836	7,052	4,008	2,165	1,505	648	27,214
Average daily number resident—							
Males	5,337	2,926	2,029	1,058	878	310	12,538
Females	5,314	3,328	1,782	1,053	572	349	12,398
Total	10,651	6,254	3,811	2,111	1,450	659	24,936
Number of patients on books at end of year per 1,000 of population—							
Males	3.85	3.21	3.67	3.30	3.44	2.25	3.52
Females	3.97	3.62	3.44	3.28	2.45	2.70	3.60
Total	3.91	3.42	3.55	3.29	2.96	2.47	3.56
Average number of patients resident in mental hospitals per 1,000 of mean population—							
Males	3.55	2.89	3.56	3.27	3.40	2.34	3.30
Females	3.53	3.20	3.28	3.20	2.34	2.69	3.27
Total	3.54	3.04	3.43	3.24	2.88	2.52	3.29

(a) See footnote (a) to previous table.

Persons who are well advanced towards recovery are allowed to leave the institutions and reside with their relatives or friends, but they are under supervision and their names are kept in the records.

4. Revenue and Expenditure, 1947-48.—The revenue of Government mental hospitals is small in comparison with their cost, and consists chiefly of patients' fees. The proportion of expenditure borne by the State amounts to about 86 per cent. In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian hospitals.

MENTAL HOSPITALS : FINANCES, 1947-48.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Revenue (excluding Government Grants)—							
Fees of Patients ..	177,300	130,846	55,754	34,521	34,756	11,065	444,242
Other ..	25,539	13,148	3,577	17,739	3,772	184	63,959
Total ..	202,839	143,994	59,331	52,260	38,528	11,249	508,201
Expenditure—							
Salaries and Wages ..	836,020	440,968	314,510	150,487	136,530	77,395	1,955,910
Upkeep and Repair of Buildings, &c. ..	72,977	..	9,755	13,433	6,777	1,903	104,845
All Other(a) ..	590,828	495,231	188,316	113,499	81,448	45,599	1,514,921
Total ..	1,499,825	936,199	512,581	277,419	224,755	124,897	3,575,676
Expenditure per Average Daily Resident ..	£140/16/4	£149/13/11	£134/10/-	£131/8/4	£155/0/1	£189/10/6	£143/7/11

(a) Includes the following amounts for capital expenditure on Purchases of Land, Cost of New Buildings, and Additions to Buildings: New South Wales, £63,122; Victoria, £111,261; South Australia, £3,393; and Western Australia, £85.

5. Summary for Australia, 1938-39 and 1944-45 to 1947-48.—The following table gives a summary of mental hospitals in Australia during 1938-39 and for each of the years 1944-45 to 1947-48:—

MENTAL HOSPITALS : SUMMARY, AUSTRALIA.

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
Institutions No.	35	32	33	33	34
Medical Staff	92	89	95	99	108
Nursing Staff	4,922	4,104	3,803	4,078	4,198
Beds	25,654	26,177	26,520	26,984	27,219
Admissions	3,757	3,074	3,919	3,925	4,061
Discharged as recovered, relieved, etc.	1,800	1,703	1,792	2,150	1,969
Deaths	1,632	1,834	1,976	1,888	1,923
Inmates at end of year ..	26,509	26,978	27,158	27,045	27,214
Revenue (excluding Government Grants) ..	£ 262,817	427,278	428,951	457,131	508,201
Expenditure—Total ..	£ 1,903,817	2,409,317	2,579,399	2,893,208	3,575,676
—Per Average Daily Resident ..	£79/2/4	£97/10/4	£102/19/8	£116/6/11	£143/7/11

6. **Number of Mental Patients, 1938-39 and 1944-45 to 1947-48.**—The total number returned as under treatment shows slight fluctuations during the period but the proportion to total population shows a slight decline to 1947-48. A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an early stage, and an increase in the number of recorded cases, therefore, does not necessarily imply an actual increase in insanity.

MENTAL PATIENTS IN INSTITUTIONS.

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
NUMBER.					
New South Wales	11,678	11,850	11,865	11,834	11,836
Victoria	7,326	7,242	7,262	7,037	7,052
Queensland	3,650	3,840	3,876	3,933	4,008
South Australia	1,747	1,925	2,024	2,107	2,165
Western Australia	1,477	1,465	1,475	1,471	1,505
Tasmania	631	656	656	663	648
Australia	26,509	26,978	27,158	27,045	27,214

PER 1,000 OF POPULATION.

New South Wales	4.25	4.06	4.03	3.96	3.91
Victoria	3.92	3.62	3.60	3.45	3.42
Queensland	3.59	3.57	3.56	3.55	3.55
South Australia	2.93	3.07	3.19	3.26	3.29
Western Australia	3.16	3.02	3.01	2.96	2.96
Tasmania	2.66	2.64	2.60	2.58	2.47
Australia	3.81	3.66	3.65	3.59	3.56

The difference between States in the number of mental patients in institutions per 1,000 of population may be due to some extent to differences in classification.

7. **Causes of Insanity.**—The general information available respecting the causes of the insanity of persons admitted to institutions is too unsatisfactory to enable a classification of patients by cause of insanity to be given.

8. **Length of Residence in Hospital, 1947-48.**—(i) *New South Wales and Victoria.* Particulars are not available regarding the average length of residence in hospitals of persons who died or were discharged during the year.

(ii) *Queensland.* The average residence of those who died during 1947-48 was 7 years 360 days for males, and 6 years 104 days for females; of those discharged, 357 days for males, and 1 year 142 days for females.

(iii) *South Australia.* The average residence of those who died during 1947-48 was 5 years 4 months 12 days for males, and 5 years 3 months 29 days for females; of those discharged, 5 years 3 months 12 days for males, and 2 years 10 months 19 days for females.

(iv) *Western Australia.* The average residence of those who died in 1947 was 10 years 6 months 4 days for males, and 9 years 2 months 9 days for females; of those discharged, 2 years 6 months 4 days for males, and 4 years 4 months 23 days for females.

(v) *Tasmania.* The average residence of those who died during 1947-48 was 3 years 35 days for males, and 5 years 295 days for females; of those discharged, 1 year 55 days for males, and 1 year 355 days for females.

CHAPTER IX.

WELFARE SERVICES.

A. COMMONWEALTH SOCIAL SERVICE BENEFITS.

§ 1. Introduction.

Commonwealth social service benefits are provided under the Social Services Consolidation Act 1947-1949 which came into operation on 1st July, 1947. This Act provided for the repeal of the existing laws relating to age and invalid pensions, maternity allowances, child endowment, widows' pensions and unemployment and sickness benefits, and for the immediate re-enactment of the necessary provisions for the grant and payment of these benefits under a unified law. Its more important effects were the elimination of obsolete provisions, the removal of anomalies, the amalgamation of like provisions, and the modernizing and grouping of the legislation so that it presented a symmetrical part of a well-defined pattern of social security. The history of the variations in the rates and conditions of age and invalid pensions, maternity allowances, child endowment, widows' pensions and unemployment and sickness benefits prior to 1st July, 1947 is referred to in earlier issues of the Official Year Book.

The benefits provided under the Consolidation Act are financed from the National Welfare Fund.

§ 2. Age and Invalid Pensions.

1. **General.**—Age pensions are payable to men, 65 years of age and over, and women, 60 years of age and over, who have resided in Australia for a continuous period of 20 years. Any periods of absence during which a person's home remained in Australia, and absences in certain other circumstances, are counted as residence. Absence in a Territory of the Commonwealth does not break continuity of residence.

Invalid pensions are payable to persons, 16 years of age and over, who have resided in Australia for a continuous period of five years, and who are permanently incapacitated for work or permanently blind. For the purpose of the residential qualification, the position in regard to absences is the same as for age pensions. A person is deemed to be permanently incapacitated for work if the degree of his permanent incapacity is not less than 85 per cent. The claimant must have become permanently incapacitated or permanently blind while in Australia or during a temporary absence from Australia, but this condition is waived if he has resided in Australia for not less than 20 years (continuous or otherwise), which may be partly before or partly after the occurrence of the permanent incapacity or blindness.

2. **Persons Disqualified.**—A pension is not payable to:—an alien (except a woman who, prior to marriage, was a British subject); a person who has deprived himself of property or income in order to qualify for a pension; a person in receipt of income of £188 10s. per annum or more (blind persons £416 per annum) or £377 per annum for

a married couple (£526 10s. per annum where both husband and wife are blind); a person who owns property, apart from his permanent home and other exempt property, to the net value of more than £750 (£1,500 for married persons); a person who is not deserving of a pension; a person who is not of good character or who has deserted his wife (or her husband) or children for six months or upwards immediately preceding the date of the claim (age pension only); or a person under 21 years of age who is adequately maintained by his parents (invalid pension only).

3. **Aboriginal Natives.**—Pensions may be granted to aboriginal natives of Australia who have been granted exemption from State control laws, or who, in any State where exemption is not provided for, are considered suitable persons to receive pensions by virtue of character, standard of intelligence and social development.

4. **Pension Rate.**—The maximum rate of pension from 21st October, 1948, is £110 10s. per annum.

5. **Effect of Income.**—Permissible income is £78 per annum. Any income in excess of this amount is deducted from the pension. The income of a married person is deemed to be half the total income of husband and wife except where they are legally separated or in certain other circumstances. Permissible income for blind persons, whether single or married, is £305 10s. per annum. Any excess income is deducted from the pension. Where both husband and wife are blind, half the amount of any income in excess of £305 10s. per annum is deducted from each pension. "Income" does not include gifts or allowances from children or parents, benefits from friendly societies, payments in respect of illness, infirmity or old-age from any trade union, the value of State food relief, child endowment or other payments for or in respect of children, benefits under the Commonwealth Hospital Benefits, Pharmaceutical Benefits and Tuberculosis Acts and interest on Commonwealth war gratuities.

6. **Effect of Property.**—The rate of pension is reduced by £1 per annum for every complete £10 of that portion of the net value of property which exceeds £100 but does not exceed £450, and by £2 per annum for every complete £10 of the remainder (if any) of the net value of the property up to £750. The value of property of a married person is deemed to be half the total value of property of husband and wife.

The value of a home, furniture and personal effects, the surrender value (up to £200) of any life assurance policies, the capital value of any life interest, annuity or contingent interest, the present value (up to £500) of any reversionary interest, the value of any property from the estate of a deceased person which has not been received and the amount of any Commonwealth war gratuity are disregarded in the computation of property.

7. **Claimants Receiving War Pensions.**—A person receiving a war pension may be granted an age or invalid pension in addition to the war pension, but the total amount payable in respect of the two pensions must not exceed £162 10s. per annum. In the case of a married couple where husband and wife each receive a civil pension (age or invalid, wife's allowance or service pension), the total amount which may be received in respect of war pensions and civil pensions is £317 4s. per annum; in other cases of married persons the limit is £260 per annum. Where the war pension (or pensions) and the civil pension (or pensions) together exceed the appropriate limit, the civil pension (or pensions) is (or are) reduced by the amount of the excess, but the pensioner is permitted to have other income to bring the total war pension and civil pension payments, plus the other income, up to the appropriate limit of income plus pension, £188 10s. per annum for a single person or £377 per annum for a married couple, both qualified for pensions.

8. **Inmates of Institutions.**—A pensioner who is an inmate of a benevolent asylum is paid £30 per annum of his pension and the balance of the pension is paid to the institution for his maintenance.

9. **Wives' Allowances.**—An allowance, not exceeding £62 8s. per annum, may be granted to the wife of an invalid pensioner (or an age pensioner who is permanently incapacitated for work or permanently blind) if she is living with her husband and is not receiving an age or invalid pension or a service pension. The rate of the allowance is affected by income and property on the same basis as an age or invalid pension.

10. **Children's Allowances.**—An allowance of £23 8s. per annum in respect of one child under the age of 16 years may be granted to the wife of an invalid pensioner living with her husband. The allowance may also be granted to any invalid pensioner who has the custody, care and control of a child under the age of 16 years, but where both husband and wife are invalid pensioners (living together) the child's allowance is payable only to the wife.

11. **Rehabilitation of Invalid Pensioners.**—The scheme for the rehabilitation of invalid pensioners, by which invalid pensioners may be given suitable treatment and vocational training at the Commonwealth's expense with a view to enabling them to learn some suitable craft or occupation whereby they may eventually become self-supporting, came into operation from the 10th December, 1948. The cases selected for treatment and training are those in which the pensioner's disability is remediable and where there are reasonable prospects of his engaging in a suitable vocation within two years after the commencement of treatment or training.

During the period of treatment payment of the pension is continued, and when vocational training is commenced the pension is suspended and, in its place, the trainee is paid a rehabilitation allowance at a rate equivalent to the rate of invalid pension (including any wife's or child's allowance) for which he is qualified, plus a training allowance of £1 per week. Where it is necessary for a trainee to live away from home for the purpose of receiving training, an additional allowance is paid. The cost of fares regularly incurred by the pensioner in travelling for the purpose of receiving treatment or training may also be paid by the Commonwealth. A pensioner undergoing treatment or training may be provided with any artificial replacements, surgical aids and appliances and with such books, equipment and tools of trade (costing not more than £10) as are required for his treatment or training or to enable him to engage in employment. The pensioner, however, is required to pay the cost of any articles which he retains for his own use, but payment may be made by small instalments after he has commenced employment.

If, in any case, the treatment or vocational training of a pensioner does not result in his being able to engage in employment, his right to continuance of his invalid pension is not thereby prejudiced in any way.

The grant or continuance of an invalid pension may be refused unless the claimant or pensioner undergoes such treatment or training as the Director-General of Social Services considers is reasonable for him to undergo, having regard to the pensioner's age and physical and mental capacity and to the facilities available.

12. **Funeral Benefits.**—From 1st July, 1943 a funeral benefit of up to £10 has been payable to the person who has paid, or is liable to pay, the cost of the funeral of an age or invalid pensioner or of a claimant who, but for his death, would have been granted an age or invalid pension. Where the cost of the funeral has been partly met by payment from a contributory funeral benefit fund of an organization other than a friendly society, funeral benefit is payable to the extent of the amount (not above £10) by which the cost of the funeral exceeded the amount paid from the fund. A funeral benefit is not payable to a person administering a contributory funeral benefit fund.

13. Rates of Pension Payable.—The following statement shows the rates of pension at 1st July, 1909 and the rates as they have been varied since that date :—

MAXIMUM RATES OF PENSION PAYABLE.

(£ s. d.)

Date from which Operative	Maximum Pension Payable—		Limit of Income including Pension.	
	Annual Rate.	Weekly Equivalent.	Annual Rate.	Weekly Equivalent.
1st July, 1909	26 0 0	0 10 0	52 0 0	1 0 0
12th October, 1916	32 10 0	0 12 6	58 10 0	1 2 6
1st January, 1920	39 0 0	0 15 0	65 0 0	1 5 0
13th September, 1923	45 10 0	0 17 6	78 0 0	1 10 0
8th October, 1925	52 0 0	1 0 0	84 10 0	1 12 6
23rd July, 1931	45 10 0	0 17 6	78 0 0	1 10 0
13th October, 1932(a)	39 0 0	0 15 0	71 10 0	1 7 6
26th October, 1933	45 10 0	0 17 6	78 0 0	1 10 0
4th July, 1935 (b)	46 16 0	0 18 0	79 6 0	1 10 6
24th September, 1936	49 8 0	0 19 0	81 18 0	1 11 6
9th September, 1937	52 0 0	1 0 0	84 10 0	1 12 6
26th December, 1940	54 12 0	1 1 0	87 2 0	1 13 6
3rd April, 1941 (b)	55 18 0	1 1 6	88 8 0	1 14 0
11th December, 1941	61 2 0	1 3 6	93 12 0	1 16 0
2nd April, 1942(b)	62 8 0	1 4 0	94 18 0	1 16 6
2nd April, 1942(c)	65 0 0	1 5 0	97 10 0	1 17 6
1st October, 1942(b)	66 6 0	1 5 6	98 16 0	1 18 0
7th January, 1943(b)	67 12 0	1 6 0	100 2 0	1 18 6
1st April, 1943(b)	68 18 0	1 6 6	101 8 0	1 19 0
19th August, 1943(b)	70 4 0	1 7 0	102 14 0	1 19 6
25th November, 1943(b)(d)	68 18 0	1 6 6	101 8 0	1 19 0
25th November, 1943(d)	70 4 0	1 7 0	102 14 0	1 19 6
5th July, 1945	84 10 0	1 12 6	117 0 0	2 5 0
13th August, 1946	84 10 0	1 12 6	136 10 0	2 12 6
3rd July, 1947	97 10 0	1 17 6	149 10 0	2 17 6
21st October, 1948	110 10 0	2 2 6	188 10 0	3 12 6

(a) Additional pension of £10 10s. per annum (2s. 6d. per week) was payable to a pensioner with no income. Pensioners with income of less than 2s. 6d. per week were paid additional pension of 2s. 6d. less the amount of income.

(b) Variation according to rise in retail price index number. (c) Increase paid on 9th July, 1942, retrospective to 2nd April, 1942. (d) Rate restored to £70 4s. per annum under National Security (Supplementary) Regulation 112A—Statutory Rule 315 of 1943.

NOTE.—Provision for variations according to retail price index numbers repealed 6th April, 1944.

14. Age Pensions.—(i) *Number in force.* At 30th June, 1948 there were 302,854 age pensions in force. During 1948-49, 43,785 age pensions claims were granted and 1,041 pensioners were transferred from the invalid pension list, while 26,353 pensions expired through cancellations and deaths. The net increase for the year was 18,473 and the total in force at 30th June, 1949 was 321,327.

(ii) *Sexes of Age Pensioners—States.* Of the age pensioners at 30th June, 1949, 112,803 (or 35 per cent.) were males, and 208,524 (or 65 per cent.) were females. Details for each State are as follows :—

AGE PENSIONERS : SEXES OF PENSIONERS AT 30th JUNE, 1949.

State.	Males.	Females.	Total.	Masculinity.(a)
New South Wales (b)	48,194	83,747	131,941	57.55
Victoria	26,178	55,575	81,753	47.10
Queensland	16,086	27,598	43,684	58.28
South Australia (c)	9,377	19,881	29,258	47.16
Western Australia	9,019	14,720	23,739	61.28
Tasmania	3,949	7,003	10,952	56.40
Total—30th June, 1949	112,803	208,524	321,327	54.09
„ 1948	105,674	197,180	302,854	53.59

(a) Number of males to each 100 females.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

(iii) *Age and Conjugal Condition of Age Pensioners.* The recorded ages of the 43,785 persons (16,699 males and 27,086 females) to whom age pensions were granted during the year 1948-49 varied considerably, ranging from 7,048 at age 60 to 2 at age 97, but 32,040 were in the 60-70 group. The conjugal condition of these new pensioners was as follows:—Males—single, 2,208; married, 11,315; and widowed, 3,176: Females—single, 3,663; married, 13,098; and widowed, 10,325.

15. *Invalid Pensions.*—(i) *Number in force.* The number of invalid pensioners increased from 73,073 in 1947-48 to 76,056 in 1948-49, an increase of 2,983. Total pensions granted during the year were 11,752 while 7,728 pensions ceased through cancellations or deaths, and 1,041 were transferred to the age pension list.

(ii) *Sexes of Invalid Pensioners—States.* Of the 76,056 persons in receipt of invalid pensions on 30th June, 1949, 40,313 (or 53 per cent.) were males, and 35,743 (or 47 per cent.) were females. Details for each such State are as follows:—

INVALID PENSIONS : SEXES OF PENSIONERS AT 30th JUNE, 1949.

State.	Males.	Females.	Total.	Masculinity.(a)
New South Wales (b)	19,426	16,095	35,521	120.70
Victoria	7,779	7,796	15,575	99.78
Queensland	6,792	5,677	12,469	119.64
South Australia (c)	2,404	2,583	4,987	93.07
Western Australia	2,337	2,003	4,340	116.67
Tasmania	1,575	1,589	3,164	99.12
Total—30th June, 1949	40,313	35,743	76,056	112.79
„ 1948	38,015	35,058	73,073	108.43

(a) Number of males to each 100 females.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

(iii) *Age and Conjugal Condition of Invalid Pensioners.* The recorded ages of the 11,752 persons (7,216 males and 4,536 females) to whom invalid pensions were granted during 1948-49 varied from 16 to 88, 5,377 or 46 per cent. being in the 45-59 years age-group.

The conjugal condition of persons to whom invalid pensions were granted during the year was as follows:—Males—single, 2,270; married, 4,488; and widowed, 458: Females—single, 2,257; married, 1,686; and widowed, 593.

16. *Age and Invalid Pensions : Payments and Annual Liability.*—Separate particulars of the payments to age and invalid pensioners are not available but the total payments in 1948-49 in each State together with the annual liability of each class of pensioner at 30th June, 1949 are shown in the following table:—

AGE AND INVALID PENSIONS : PAYMENTS AND ANNUAL LIABILITY. (£.)

State.	Total Payments Age and Invalid Pensions, 1948-49.(a)	Annual Liability at 30th June, 1949.		
		Age Pensions.	Invalid Pensions.	Total.
New South Wales (b)	17,489,106	13,736,928	3,802,481	17,539,409
Victoria	10,244,132	8,735,811	1,658,924	10,394,735
Queensland	5,941,139	4,694,210	1,356,278	6,050,488
South Australia (c)	3,584,978	3,114,258	542,758	3,657,016
Western Australia	2,921,040	2,505,992	461,211	2,967,203
Tasmania	1,513,285	1,133,040	337,349	1,470,389
Total—1948-49	41,693,680	33,920,239	8,159,001	42,079,240
1947-48	36,526,395	28,221,549	6,912,671	35,134,220

(a) Includes amounts paid to Benevolent Asylums and Hospitals for the maintenance of pensioners, and allowances to wives of invalid pensioners.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

17. **Cost of Administration.**—The total cost of administering age and invalid pensions, including allowances to wives of invalid pensioners, was £399,304 in 1948-49 or 0.96 per cent. of the amount paid to pensioners, benevolent asylums and hospitals and for wives' allowances. The corresponding cost in 1947-48 was £309,146 or 0.85 per cent. of the total payments.

The actual sum disbursed in age and invalid pensions in the financial year 1948-49, apart from the cost of administration but including the amount paid to asylums and hospitals for the maintenance of pensioners and allowances to wives of invalid pensioners, was £41,693,680 (£5 6s. 11d. per head of mean population). In 1947-48 it was £36,526,395 (£4 15s. 7d. per head of mean population).

18. **Summary.**—The following table gives details of age and invalid pensions and approximate cost of administration for the five years 1938-39 and 1944-45 to 1948-49 :—

AGE AND INVALID PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Number of Pensioners.				Amount Paid in Pensions.	Total Payment to Pensioners and Institutions. (b)	Cost of Administration (approximate).	Cost of Administration per £100 paid to Pensioners and Institutions (approximate).	Average Fort-nightly Pension as at 30th June.
	Age.		Invalid.	Total.					
	No.	Est. No. per 1,000 of persons eligible on age qualification. (a)							
No.		No.	No.	£	£	£	s. d.	s. d.	
1939	232,836	376	88,812	321,648	15,798,038	15,991,782	128,000	16 0	38 5
1945	252,634	345	58,281	310,915	21,475,570	21,701,127	199,434	18 5	51 5
1946	264,826	358	62,868	327,694	26,735,092	26,962,420	216,740	16 1	62 8
1947	290,173	375	68,277	358,450	29,295,099	29,416,073	254,504	17 4	62 8
1948	302,854	380	73,073	375,927	36,376,104	36,526,395	309,146	16 11	71 11
1949	321,327	389	76,056	397,383	41,535,907	41,693,680	399,304	19 2	81 5

(a) Based on an estimate of the aggregate of males aged 65 and over and females aged 60 and over at 30th June of each year. (b) Includes allowances to wives of invalid pensioners payable from the 8th July, 1943, but excludes funeral benefits in respect of deaths of pensioners, £163,993 in 1944-45; £184,478 in 1945-46; £209,349 in 1946-47; £209,588 in 1947-48 and £252,979 in 1948-49.

§ 3. Maternity Allowances.

1. **General.**—A maternity allowance is payable to a woman who, at the date of giving birth to a child, is residing in Australia or is in Australia and intends to remain. The allowance is payable in respect of a birth which occurs in Australia or on board a ship proceeding from a port in Australia or a Territory of the Commonwealth to another port in Australia or a Territory of the Commonwealth. The allowance is also payable in respect of a birth which occurs on board a ship proceeding to Australia, provided the mother receives no maternity benefit in respect of the birth from the country from whence she came. Payment may be made in respect of the birth of a still-born child, or a child which lives for less than twelve hours, if the period of intra-uterine life of the child was at least 5½ calendar months. There is no means test.

2. **Alien Mothers.**—Payment may be made to an alien mother if she was a British subject prior to her marriage, or if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child, otherwise payment is deferred until the expiration of twelve months from the date of the mother's arrival in Australia, unless she is likely to remain in Australia.

3. **Aboriginal Natives.**—Maternity allowances may be paid only to those aboriginal natives of Australia who have been granted exemption from State control laws or who, in any State where exemption is not provided for, are considered suitable persons to receive the allowance by virtue of character, standard of intelligence and social development.

4. **Amount Payable.**—From 1st July, 1947, the amount of a maternity allowance has been £15 where there are no other children; £16 where there are one or two other children; and £17 *ros.* where there are three or more other children. "Other children" means children under the age of sixteen years who were in the custody, care and control of the claimant on the date of the birth in respect of which the claim is made. The amount payable is increased by £5 in respect of each additional child born at a birth. Payment of £5 on account of a maternity allowance may be made available, upon application, within a period of four weeks prior to the expected date of birth. The balance is payable immediately after the birth.

5. **Persons Temporarily Abroad.**—Maternity allowances may be paid, under certain conditions, to persons ordinarily resident in Australia who are temporarily abroad.

6. **Summary.**—The following table gives details of the maternity allowance claims paid and rejected and of the amount paid since the inception and for the six years 1938-39 and 1944-45 to 1948-49:—

MATERNITY ALLOWANCES: SUMMARY.

Year.	Claims Paid.	Claims Rejected.	Amount Paid.	Cost of Administration (approximate).	Cost per £100 allowance paid (approximate).
	No.	No.	£	£	£ s. d.
1938-39 ..	80,916	6,272	436,614	16,659	3 17 8
1944-45 ..	159,621	667	2,542,801	19,000	0 14 11
1945-46 ..	156,446	718	2,492,495	18,000	0 14 5
1946-47 ..	191,994	636	3,026,459	23,000	0 15 2
1947-48 ..	177,566	247	2,854,018	22,000	0 15 5
1948-49 ..	177,955	235	2,828,819	24,000	0 17 0
Aggregate—					
1912-13 to					
1948-49 ..	4,400,582	110,520	32,746,568	550,455	1 13 7

NOTE.—Means test was abolished from 1st July, 1943.

7. **Claims paid in each State.**—The following table shows the number of maternity allowance claims paid in each State during the years 1938-39 and 1944-45 to 1948-49:—

MATERNITY ALLOWANCES: NUMBER OF CLAIMS PAID IN EACH STATE.

Year ended 30th June—	N.S.W. (a)	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	Total.
1939	30,860	20,819	12,880	7,162	5,213	3,940	42	80,916
1945	61,755	40,582	26,432	14,361	10,909	5,582	(b)	159,621
1946	60,730	40,991	25,281	13,736	9,912	5,796	(b)	156,446
1947	73,110	50,730	29,002	17,860	13,750	7,542	(b)	191,994
1948	68,116	46,027	27,920	15,856	12,553	7,074	(b)	177,566
1949	67,534	46,309	27,570	16,381	13,107	6,984	(b)	177,955
Total, 1912-13 to 1948-49 ..	1,730,186	1,144,380	667,335	385,508	286,395	185,561	1,127	4,400,582 (e)

(a) Includes Australian Capital Territory. (b) Included with South Australia. (c) Includes 20 claims paid abroad. (d) Includes 70 claims paid abroad. (e) Includes 90 claims paid abroad.

8. **Claims Paid at the Various Rates.**—The following table shows the number of claims paid in each State at the several rates of maternity allowance during the year 1948-49. The total for Australia for the year 1947-48 is also shown:—

MATERNITY ALLOWANCES : NUMBER OF CLAIMS PAID AT EACH RATE, 1948-49.

State.	Single Births.			Multiple Births.						Total Claims Paid.
	£15.	£16.	£17 10s.	Twins.			Triplets.			
				£20.	£21.	£22 10s.	£25.	£26.	£27 10s.	
N. S. Wales(a) ..	24,780	31,800	10,189	211	387	159	3	3	2	67,534
Victoria ..	17,153	22,356	6,233	155	306	100	1	3	1	46,309
Queensland ..	9,218	12,667	5,375	84	156	68	1	..	1	27,570
Stn. Australia (b)	5,950	7,960	2,285	64	86	31	1	4	..	16,381
Western Australia	4,470	6,448	2,033	33	92	29	..	1	1	13,107
Tasmania ..	2,300	3,175	1,423	32	37	16	1	..	..	6,984
Oversea ..	41	23	4	1	1	..	..	..	..	70
Total 1948-49	63,912	84,429	27,542	580	1,065	403	7	11	5	177,955
1947-48	68,133	79,978	27,387	645	1,001	405	6	8	2	177,566

(a) Includes Australian Capital Territory.
one case of quadruplets, £32 10s.

(b) Includes Northern Territory.
(d) Includes one case of quadruplets, £31 in South Australia.

(c) Includes

§ 4. Child Endowment.

1. **General.**—Any person who is resident in Australia and has the custody, care and control of more than one child under the age of 16 years may claim endowment. There is a twelve months' residential requirement in respect of a claimant and a child who were not born in Australia, but this is waived if the claimant and the child are likely to remain permanently in Australia. A child born during the mother's temporary absence from Australia is deemed to have been born in Australia. There is no means test.

2. **Child of Alien Father.**—Endowment may be paid in respect of a child of an alien father if the child was born in Australia, or the mother is a British subject or has made a declaration under Section 18A of the Nationality Act 1920-1940, or the child is likely to remain permanently in Australia.

3. **Aboriginal Natives.**—Endowment may be paid to aboriginal natives of Australia unless they are nomadic or unless the children concerned are wholly or mainly maintained by the Commonwealth or a State.

4. **Rate of Payment.**—The rate of endowment payable to any qualified person (other than an institution) from 9th November, 1948 has been 10s. per week in respect of each child under 16 years of age in excess of one, and to an approved institution (not including a hospital for the insane maintained wholly or mainly by the Commonwealth or a State) 10s. per week for each child inmate under 16 years of age.

5. **Divided Families.**—There is special provision to meet cases of families divided by reason of divorce, separation, unemployment, death of a parent or other circumstances. In these cases endowment may be paid in respect of such children in excess of one, and to such persons, as is considered just.

6. **Persons Temporarily Abroad.**—Endowment may be paid, under certain conditions, to persons ordinarily resident in Australia who are temporarily abroad.

7. **Summary.**—During the year 1948-49, 65,602 claims were granted, cancellations amounted to 31,198 and the number of endowed family group claims in force at 30th June, 1949 was 620,819, an increase of 34,404 during the year. The following table shows particulars of the operations during the year ended 30th June, 1949, and earlier years :—

CHILD ENDOWMENT : SUMMARY, 1948-49.

Family Groups.							Total Payments to Endowees and Institutions.
State.	Claims in force at end of year.	Endowed Children.		Annual Liability at 30th June, 1949.			
		Total.	Average per claim.	Total.	Average Liability per claim.		
	No.	No.	No.	£	£	£	
New South Wales(a)	247,027	426,991	1.73	11,101,766	44.94	9,313,460	
Victoria ..	157,625	265,672	1.69	6,907,472	43.82	6,153,650	
Queensland ..	94,206	177,126	1.88	4,605,276	48.89	4,024,422	
South Australia(b) ..	53,827	90,239	1.68	2,346,214	43.59	2,011,816	
Western Australia ..	45,194	79,693	1.76	2,072,018	45.85	1,809,928	
Tasmania ..	22,872	44,170	1.93	1,148,420	50.21	1,008,526	
Oversea ..	68	103	1.51	2,678	39.38	1,611	
Total—1948-49 ..	620,819	1,083,994	1.75	28,183,844	45.40	24,323,413	
1947-48 ..	586,415	1,029,777	1.76	20,080,652	34.24	19,425,518	
1946-47 ..	559,730	986,814	1.76	19,242,873	34.38	19,862,933	
1945-46 ..	533,819	945,542	1.77	18,438,069	34.54	18,019,178	
1944-45 ..	518,293	920,427	1.78	17,948,326	34.63	12,036,249	

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

In addition to the children endowed in families, child endowment benefits were paid in respect of children in approved institutions during 1944-45 to 1948-49 as follows : 1944-45, 18,116; 1945-46, 18,989; 1946-47, 19,743; 1947-48, 20,580; and in 1948-49 21,305.

In 1948-49 the cost of administration was £206,241 or 0.85 per cent. of the total payments made, compared with £173,607 or 0.89 per cent. in 1947-48.

8. **Number of Children.**—The following table shows the number of claims in force, the number of endowed children and the number of unendowed children in endowed families, classified according to the number of children in the family :—

CHILD ENDOWMENT : NUMBER OF CHILDREN(a) AT 30th JUNE, 1949.

Size of Family.	Claims of Endowed Families in force at 30th June, 1949.	Children.		
		Endowed.	Unendowed in Endowed Families.	Total in Endowed Families.
Two children ..	347,536	347,536	347,536	695,072
Three " ..	161,147	322,294	161,147	483,441
Four " ..	66,375	199,125	66,375	265,500
Five " ..	26,651	106,604	26,651	133,255
Six " ..	11,078	55,390	11,078	66,468
Seven " ..	4,802	28,812	4,802	33,614
Eight " ..	2,135	14,945	2,135	17,080
Nine " ..	711	5,688	711	6,399
Ten " ..	281	2,529	281	2,810
Eleven " ..	72	720	72	792
Twelve " ..	22	242	22	264
Thirteen " ..	8	96	8	104
Fourteen, " ..	1	13	1	14
Total 1948-49 ..	620,819	1,083,994	620,819	1,704,813
1947-48 ..	586,415	1,029,777	586,415	1,616,192
1946-47 ..	559,730	986,814	559,730	1,546,544
1945-46 ..	533,819	945,542	533,819	1,479,361
1944-45 ..	518,293	920,427	518,293	1,438,720

(a) Under 16 years of age.

§ 5. Widows' Pensions.

1. **General.**—Widows' pensions and the rates in each class, as from 12th October, 1948, have been payable to the following classes of women :—

Class "A"—A widow who has the custody, care and control of one or more children under the age of 16 years. Rate £123 10s. per annum.

Class "B"—A widow, not less than 50 years of age, who has no children under 16 years of age in her custody, care and control. Rate £96 4s. per annum.

Class "C"—A widow, under 50 years of age, who has no children under the age of 16 years in her custody, care and control, but is in necessitous circumstances within 26 weeks after the death of her husband. Rate £2 2s. 6d. per week for not more than 26 weeks.

Class "D"—A woman whose husband has been serving a term of imprisonment for at least six months, if she has the custody, care and control of one or more children under the age of 16 years or is not less than 50 years of age. Rate £96 4s. per annum.

The term "widow" includes :—a "dependent female" (i.e. a woman, who, for not less than three years immediately prior to the death of a man, was wholly or mainly maintained by him as his wife on a permanent and *bona fide* domestic basis); a deserted wife (i.e. a woman deserted by her husband for not less than six months); a divorcee (i.e. a woman whose marriage has been dissolved and who has not remarried); and a woman whose husband is an inmate of a hospital for the insane.

The residential qualification is five years' continuous residence in Australia immediately prior to the date of lodgment of the claim. Concessions in respect of absences are the same as for age pensions.

2. **Persons Disqualified.**—A widow's pension is not payable to :—an alien (except a woman who, prior to marriage, was a British subject); a woman who is in receipt of an age or invalid pension, or a war widow's pension under the Australian Soldiers' Repatriation Act in respect of the death of her husband; a woman who has deprived herself of property or income in order to qualify for a pension; a deserted wife or a divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband; a woman who is not of good character; a woman who is not deserving of a pension; a woman in Class "A" in receipt of income of £201 10s. per annum or more or owning property, apart from her permanent home and other exempt property, to the net value of more than £1,000; or a woman in Classes "B" or "D" in receipt of income of £174 4s. per annum or more or owning property, apart from her permanent home and other exempt property, to the net value of more than £750.

3. **Aboriginal Natives.**—Widows' pensions may be granted to aboriginal natives of Australia under the same conditions as age pensions.

4. **Effect of Income.**—Permissible income is £78 per annum. Any income in excess of this amount is deducted from the pension. "Income" has the same meaning as for age pensions. Any amount in excess of 15s. per week received by a deserted wife or a divorcee from her husband or former husband in respect of the maintenance of a child is taken into account in the claimant's income for pension purposes.

5. **Effect of Property.**—The rate of pension for women in Classes "B" and "D" is reduced by £1 per annum for every complete £10 of that portion of the net value of property which exceeds £100 but does not exceed £450, and by £1 per annum for every complete £7 of the remainder (if any) of the net value of the property up to £750. Property disregarded in determining eligibility for pension is the same as for age pensions.

6. **Claimants Receiving War Pension.** A widow is not permitted to receive, in respect of the death of her husband, both a war widow's pension under the Australian Soldiers' Repatriation Act and a civil widow's pension. Other widows, however, may receive a civil widow's pension in addition to a war pension, but the total amount payable in

respect of the two pensions must not exceed £188 10s. per annum in the case of a Class "A" widow or £162 10s. per annum in the case of a widow coming within Classes "B", "C" or "D". Where the war pension and the widow's pension together exceed the limit applicable, the widow's pension is reduced by the amount of the excess. The widow is permitted to have, in addition, other income to bring her total war pension and widow's pension payments up to the appropriate limit of income plus pension, £201 10s. per annum for a Class "A" widow, £174 4s. for a Class "B" or "D" widow.

7. **Payment of Class "A" Pension for Children Continuing Education.**—The pension payable to a Class "A" widow may be continued after her child attains the age of 16 years if the child goes on with full-time education at a school or university and is still dependent on the widow and is not in employment. These conditions apply until the child reaches the age of 18 years.

8. **Summary.**—The number of widows' pensions current at 30th June, 1949 was :—Class "A", 17,891; Class "B", 25,127; Class "C", 117; Class "D", 116; total, 43,251, and the amount paid during 1948-49 was £4,388,468. The following table shows details of widows' pensions paid in each State in the year 1948-49 and for Australia for each of the years 1944-45 to 1948-49 :—

WIDOWS' PENSIONS AT 30th JUNE, 1949.(a)

State.	Pensions Current.(b)		Children for whom Pensions Payable.	Average Fort-nightly rate of Pension.		Amount paid in Pensions during 1948-49.			
	Number.	Per 10,000 of Population.		(c)	Amount.	Per head of Population.(d)			
No.	£	s.	d.	£	s.	d.			
New South Wales (e)	17,402	56	7,751	3	19	10	1,761,978	11	5
Victoria ..	11,164	52	3,916	3	18	8	1,120,589	10	7
Queensland ..	6,879	60	3,025	4	1	7	719,521	12	8
South Australia(f) ..	3,514	51	1,328	3	18	11	364,211	10	9
Western Australia ..	2,883	54	1,213	4	0	3	280,360	10	9
Tasmania ..	1,409	52	658	3	18	5	141,809	10	7
Total 1948-49 ..	43,251	55	17,891	3	19	8	4,388,468	11	3
1947-48 ..	43,025	56	17,732	3	8	11	3,904,086	10	3
1946-47 ..	42,742	56	16,702	65	18	1	3,366,288	8	11
1945-46 ..	44,587	60	15,707	65	14	0	3,247,333	8	9
1944-45 ..	44,155	60	15,284	65	6	1	2,965,446	8	1

(a) The Commonwealth Government commenced to pay widows' pensions from 1st July, 1942.

(b) Excludes eleven (1948-49), six (1947-48), thirteen (1946-47), ten (1945-46), nine (1944-45) pensions in respect of pensioners in Benevolent Asylums.

(c) Payments were four-weekly up to the 24th June, 1947 pay.

(d) Based on mean population for the financial year.

(e) Includes Australian Capital Territory.

(f) Includes Northern Territory.

§ 6. Unemployment and Sickness Benefits.

1. **General.**—From 1st July, 1946, men over 16 and under 65 years of age, and women over 16 and under 60 years of age, have been eligible to apply for an unemployment benefit or a sickness benefit. There is a twelve month's residential requirement but this is waived if the claimant is likely to remain permanently in Australia. A person in receipt of an age, invalid or widows' pension, or a service pension (as distinct from a war pension) under the Australian Soldiers' Repatriation Act is ineligible to receive a benefit.

2. **Unemployment Benefit.**—To qualify for an unemployment benefit a person must establish that he is unemployed and that his unemployment is not due to his being a direct participant in a strike; that he is capable and willing to undertake suitable work; and that he has taken reasonable steps to obtain such work.

3. **Sickness Benefit.**—To qualify for a sickness benefit a person must establish that he is temporarily incapacitated for work by reason of sickness or accident and that he has thereby suffered a loss of salary, wages or other income.

4. **Married Women.**—A married woman is not qualified to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where her husband is able to maintain her only partially, a benefit may be paid at such rate as is considered reasonable in the circumstances.

5. **Aboriginal Natives.**—A benefit may be paid only to those aboriginal natives of Australia who are considered suitable, by reason of character, standard of intelligence and social development, to receive payment.

6. **Maximum Rates of Benefits and Income.**—The maximum weekly rates of benefit and permissible income are as follows:—

MAXIMUM RATES OF BENEFITS AND INCOME.

(s. d.)

Age and Conjugal Condition.	Maximum Weekly Benefit.				Permissible Income.
	Claimant.	Dependent Spouse.	Child.	Total.	
Unmarried—					
16 years and under 17 years	15 0	..	..	15 0	5 0
17 " " " 18 "	15 0	..	..	15 0	10 0
18 " " " 21 "	20 0	..	..	20 0	15 0
21 years and over ..	25 0	..	..	25 0	20 0
Married	25 0	20 0	5 0	50 0	20 0

Where an unmarried claimant has the custody, care and control of a child under the age of sixteen years, the total income may be increased by 5s. per week.

Additional benefit of up to 20s. per week may be paid in respect of a claimant's housekeeper where no such benefit is payable in respect of his wife, provided there are one or more children under 16 years of age in the house and the woman is substantially dependent on the claimant but is not employed by him.

7. **Means Test.**—Any income in excess of the permissible income shown in the previous table is deducted from the rate of benefit. For unemployment benefit purposes, the income of the claimant and his spouse are taken into account, but where the claimant and his spouse are permanently separated any income received by the spouse may be disregarded. "Income" does not include child endowment, or other payments for or in respect of children, benefits under the Commonwealth Hospital Benefits, Pharmaceutical Benefits and Tuberculosis Acts or an amount paid in reimbursement of medical, dental or similar expenses actually paid. For sickness benefit purposes, there is disregarded £1 per week of any payment received from an approved friendly society or other similar approved body in respect of the incapacity for which sickness benefit is payable.

Where a person qualified for sickness benefit receives or is entitled to receive (in respect of the same period and the same incapacity for which sickness benefit is payable) any payment by way of compensation (including workers' compensation), damages, or otherwise under any law (except payments for which he has contributed), the amount of the compensation, etc., is not taken into account as income but is deducted from the rate of sickness benefit otherwise payable.

8. *Waiting Period.*—There is a waiting period of seven days in respect of which unemployment or sickness benefit is not payable.

9. *Special Benefit.*—A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not in receipt of an age, invalid or widow's pension or a service pension, if, by reason of age, physical or mental disability or domestic circumstances, or for any other reason, he is unable to earn a sufficient livelihood for himself and his dependants, if any.

10. *Rehabilitation.*—Unemployment and sickness beneficiaries are eligible for participation in the Commonwealth rehabilitation scheme under the same conditions as invalid pensioners. The grant or continuance of an unemployment or sickness benefit may be refused if the claimant or beneficiary, on being required, fails to undergo a medical examination or to receive treatment or undertake training or to do any suitable work.

11. *Statistics, 1947-48 and 1948-49.*—(i) *Claims admitted, Exits, Persons on Benefit.* At 30th June, 1948, 12,411 persons were in receipt of benefit, comprising 1,838 unemployment, 9,940 sickness and 633 special benefits. During the year 1948-49, 83,406 claims were admitted (12,126 unemployment, 68,864 sickness and 2,416 special), whilst 81,762 benefits were discontinued (12,813-unemployment, 66,804 sickness and 2,145 special), leaving 14,055 benefits in force at 25th June, 1949 (1,151 unemployment, 12,000 sickness and 904 special). Particulars of special benefits exclude those granted to new Australians.

The total number of benefits granted and discontinued during the year 1948-49 and persons on benefit at the beginning and end of that year, in each class of benefit, are shown in the following table :—

CLAIMS ADMITTED, DISCONTINUANCES AND PERSONS ON BENEFIT, 1948-49 : AUSTRALIA.

Class of Benefit.	On Benefit at 30th June, 1948.		Claims admitted during 1948-49.		Discontinuances during 1948-49.		On Benefit at 25th June, 1949.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Unemployment ..	1,718	120	11,459	667	12,143	670	1,034	117
Sickness ..	7,426	2,514	53,662	15,202	51,933	14,871	9,155	2,845
Special(a) ..	215	418	1,631	785	1,531	614	315	589
Total(a) ..	9,359	3,052	66,752	16,654	65,607	16,155	10,504	3,551

(a) Excludes benefits granted to new Australians.

(ii) *Number of Persons admitted in each State.* The following table shows the number of persons in each State admitted to benefit during the years 1947-48 and 1948-49:—

PERSONS ADMITTED TO BENEFIT.

State.	Unemployment.		Sickness.		Special.(a)		Total.(a)		
	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Males.	Fe-males.	Persons.
1947-48.									
New South Wales(b)	3,234	282	20,006	5,999	441	216	23,681	6,497	30,178
Victoria ..	971	58	12,742	4,363	327	210	14,040	4,631	18,671
Queensland ..	20,262	965	8,273	1,961	422	100	28,957	3,026	31,983
South Australia(c)	231	3	5,753	1,316	114	38	6,098	1,357	7,455
Western Australia	2,393	78	4,826	1,396	165	42	7,384	1,516	8,900
Tasmania ..	184	1	2,347	504	58	44	2,589	549	3,138
Total ..	27,275	1,387	53,947	15,539	1,527	650	82,749	17,576	100,325

1948-49.									
New South Wales(b)	2,092	165	19,927	5,917	614	283	22,633	6,365	28,998
Victoria ..	248	40	12,525	4,187	360	262	13,133	4,480	17,622
Queensland ..	8,049	406	8,609	1,990	326	78	16,984	2,483	19,467
South Australia(c)	117	7	5,443	1,286	119	46	5,679	1,339	7,018
Western Australia	839	45	4,852	1,317	128	54	5,825	1,416	7,241
Tasmania ..	114	4	2,300	496	84	62	2,498	562	3,060
Total ..	11,459	667	53,662	15,202	1,631	785	66,752	16,654	83,406

(a) Excludes benefits granted to new Australians.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

(iii) *Benefits Paid.* The following table shows the benefits paid in respect of each class of benefit in each State during each of the years 1947-48 and 1948-49:—

BENEFITS PAID.

(£.)

State.	Unemployment.		Sickness.		Special.(a)		Total.(a)	
	1947-48.	1948-49.	1947-48.	1948-49.	1947-48.	1948-49.	1947-48.	1948-49.
New South Wales(b)	60,499	23,279	302,987	302,298	14,434	53,925	377,920	379,592
Victoria ..	16,639	2,417	209,128	196,548	20,018	51,208	245,785	250,173
Queensland ..	248,357	99,591	103,521	118,789	9,604	10,219	361,482	228,599
South Australia(c)	4,038	580	79,110	76,620	3,702	6,828	86,850	84,028
Western Australia	37,192	9,986	58,255	62,569	6,149	9,845	101,596	82,400
Tasmania ..	2,904	2,993	38,326	39,002	2,611	3,729	43,841	45,724
Total ..	369,629	138,846	791,327	795,826	56,518	135,754	1,217,474	1,070,426

(a) Includes amounts paid in respect of new Australians.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

(iv) *Unemployment Benefits.* (a) *Cause of Unemployment.* The following table analyses the reasons for termination of employment in each State as stated by persons admitted to benefit during the year 1948-49.

Discharges and lay-offs are separations on the initiative of the employers, quits on that of the employee.

CAUSE OF UNEMPLOYMENT : CLAIMS ADMITTED, 1948-49.

Cause of Unemployment.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Aust.
Discharged or laid-off—							
Disciplinary reasons	11	2	146	..	13	3	175
Inefficiency, including medical unfitness	99	38	223 ¹	8	100	19	487
Power rationing	10	1	3	17	27	..	58
Shortage of materials	777	7	269	2	15	..	1,070
Strikes and lock-outs	242	..	15	36	..	6	299
Seasonal work	46	32	3,132	1	23	7	3,241
Casual work	218	36	1,417	12	165	13	1,861
Other, including inadequately defined	384	76	1,521	13	190	18	2,202
Quitted—							
Medical unfitness, work too heavy	295	77	910	23	237	41	1,583
Other	128	15	637	10	77	5	872
Not previously employed—							
Employers, workers on own ac- count	21	1	140	..	19	4	185
Ex-service personnel not yet re- turned to work	3	..	15	..	5	1	24
Other	23	3	27	2	13	1	69
Total	2,257	288	8,455	124	884	118	12,126

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(b) *Industrial Groups.* The following table shows the distribution, according to main industrial groups in each State, of persons admitted to benefit during the year 1948-49.

UNEMPLOYMENT—INDUSTRIAL GROUPS : CLAIMS ADMITTED, 1948-49.

Industry in which last engaged.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Aust.
Agricultural, Pastoral and Dairying	156	40	1,876	5	45	21	2,143
Other Primary Production	17	3	122	1	12	..	155
Coal Mining	155	1	173	..	2	1	332
Other Mining and Quarrying	23	1	88	4	39	3	158
Factories and Industrial—							
Founding, engineering, metal- working including shipbuilding	974	17	249	56	44	5	1,345
Vehicles, including aircraft	24	8	87	7	13	4	143
Textiles and articles of dress	58	14	84	1	18	6	181
Food, drink and tobacco	72	23	2,100	6	45	6	2,252
Furniture, woodwork, etc.	53	13	209	1	24	3	303
Other factories, including heat, light and power	102	25	219	7	61	6	420
Building and Construction	172	33	1,114	10	109	13	1,451
Transport and Communication	78	16	448	3	69	15	629
Commerce and Finance—							
Wholesale and retail trade	137	31	749	9	133	12	1,071
Finance and property	12	..	44	1	14	1	72
Public Administration and Profes- sional	73	17	353	3	111	7	564
Personal and Domestic Service	125	43	483	8	129	13	801
Other	26	3	57	2	16	2	106
Total	2,257	288	8,455	124	884	118	12,126

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(v) *Sickness Benefits. (a) Nature of Sickness.* The following table shows the number of admissions to sickness benefit (53,662 males and 15,202 females, Australia) during 1948-49 according to State and the main natures of sickness.

NATURE OF SICKNESS : CLAIMS ADMITTED, 1948-49.

Nature of Sickness.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Aust.
Infective and Parasitic Diseases ..	1,651	1,372	826	445	516	212	5,022
Cancer	146	76	86	43	31	7	389
Other tumours	319	192	155	62	51	19	798
Rheumatism, Diseases of Nutrition and Vitamin-Deficiency Diseases	1,449	957	607	414	308	196	3,931
Diseases of—							
Blood and blood-forming organs	201	125	74	34	29	19	482
Nervous system and sense organs	2,426	1,605	1,068	745	559	278	6,681
Circulatory system	2,108	1,378	783	520	374	197	5,360
Respiratory system	2,669	1,715	923	690	609	234	6,860
Digestive system	6,218	3,622	2,266	1,526	1,366	478	15,476
Genito-urinary system	1,391	767	616	288	280	121	3,463
Pregnancy, Childbirth, etc. ..	413	439	125	92	154	43	1,266
Skin and cellular tissue	1,360	795	560	295	335	154	3,499
Bones and organs of movement..	607	439	296	198	172	119	1,831
Other Diseases (including ill-defined conditions)	364	358	258	156	134	88	1,358
Injuries and Acute Poisoning—							
Fractures	2,351	1,545	984	598	575	270	6,323
Other injuries, etc.	2,030	1,230	915	585	651	319	5,738
Surgical Amputations	63	47	40	17	21	12	200
Other (including not stated)	78	44	26	21	10	10	189
Total	25,844	16,712	10,608	6,729	6,175	2,796	68,864

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(b) *Industrial Groups.* The following table shows the distribution according to main industrial groups of persons admitted to benefit during the year 1948-49.

SICKNESS—INDUSTRIAL GROUPS : CLAIMS ADMITTED, 1948-49.

Industry in which last engaged.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W. Aust.	Tas.	Aust.
Agricultural, Pastoral and Dairying	971	711	1,043	328	409	254	3,716
Other Primary Production	285	214	187	87	123	86	982
Coal Mining	766	58	148	2	151	14	1,139
Other Mining and Quarrying	116	89	126	39	433	148	951
Factories and Industrial—							
Founding, engineering, metal- working including shipbuilding	4,957	2,005	656	1,013	293	193	9,117
Vehicles, including aircraft	654	803	350	673	300	58	2,838
Textiles and articles of dress	2,099	2,149	385	333	218	226	5,410
Food, drink and tobacco	1,431	1,091	1,040	395	285	182	4,424
Furniture, woodwork, etc.	858	547	573	182	278	157	2,595
Other factories, including heat, light and power	2,681	1,847	621	458	431	230	6,268
Building and Construction	2,590	1,843	1,093	803	830	401	8,460
Transport and Communication	1,669	1,206	870	607	562	260	5,174
Commerce and Finance—							
Wholesale and retail trade	2,849	1,726	1,136	839	773	221	7,544
Finance and property	161	92	81	43	32	13	422
Public Administration and Profes- sional	1,282	982	675	384	364	117	3,804
Personal and Domestic Service	2,160	1,310	1,003	533	681	229	5,916
Other	15	39	21	10	12	7	104
Total	25,844	16,712	10,608	6,729	6,175	2,796	68,864

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

§ 7. Reciprocity with New Zealand.

1. **Original Agreement.**—A reciprocal agreement between Australia and New Zealand in respect of invalid and age pensions and the corresponding benefits in New Zealand came into operation from 1st September, 1943 under the provisions of the Invalid and Old-age Pensions (Reciprocity with New Zealand) Act 1943.

2. **Existing Agreement.**—A new agreement between the two countries was signed on 15th April, 1949, and was given effect from 1st July, 1949 by the Social Services (Reciprocity with New Zealand) Regulations. The Invalid and Old-age Pensions (Reciprocity with New Zealand) Act 1943 was repealed from the latter date by the Social Services Consolidation Act 1949.

The new agreement covers age, invalid and widows' pensions, child endowment and unemployment and sickness benefits in Australia and the corresponding benefits in New Zealand. It provides a new basis of entitlement for reciprocal benefits which is, broadly speaking, that citizens of one country who take up permanent residence in the other country shall be entitled to the social service benefits of the new country on the same basis as citizens of that country. For this purpose residence in New Zealand is regarded as residence in Australia (and *vice versa*); a person born in New Zealand is regarded as a person born in Australia (and *vice versa*); and permanent incapacity or blindness which occurred in New Zealand is treated as if it had occurred in Australia (and *vice versa*).

Persons going from one country to the other for temporary residence continue to receive any benefits which they have been receiving in their own country. The home country continues to provide the benefits during these temporary periods, but the payments are made, on an agency basis, by the country in which the person is temporarily resident.

B. OTHER SERVICES.

§ 1. Benevolent and Destitute Asylums.

1. **General.**—The public provisions for the care of indigent old people have been a feature of the social development of recent years in most countries. Numerous establishments exist in Australia for the housing and protection of persons no longer able to provide for themselves. These institutions are supported by Government and municipal aid, public subscriptions, bequests, etc.; while in many cases relatives of poor and afflicted persons contribute to their maintenance.

An entirely satisfactory statistical tabulation in regard to all forms of charitable aid is especially difficult in the case of benevolent institutions, because the services provided by these institutions are not always identical.

2. **Principal Institutions.**—Particulars respecting the accommodation and the number of inmates of the principal institutions were published in earlier issues of the Official Year Book (*see* No. 22, p. 485).

3. Revenue and Expenditure.—Details regarding revenue and expenditure for the year 1947-48 are given in the following table :—

BENEVOLENT ASYLUMS : REVENUE AND EXPENDITURE, 1947-48.

(£.)

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Revenue—							
Government Aid	269,321	156,661	119,343	24,720	22,250	43,425	635,720
Municipal Aid ..	..	1,111	..	..	..	..	1,111
Public Subscriptions, Legacies	..	29,850	6,948	..	309	336	37,443
Fees ..	42,193	96,530	72,453	13,844	31,313	19,128	275,467
Other ..	..	10,715	25,832	7,692	..	1,862	46,101
Total 1947-48	311,514	294,873	224,576	46,256	53,872	64,751	995,842
1946-47	296,401	250,733	200,755	36,708	40,224	56,806	887,627
Expenditure—							
Salaries and Wages ..	146,930	165,994	80,715	22,668	27,949	37,283	481,539
Upkeep and Repair of Buildings ..	29,674	12,308	7,604	4,033	5,854	1,538	61,011
All Other(b) ..	134,910	123,698	140,288	19,555	20,125	25,694	464,270
Total 1947-48	311,514	302,000	228,607	46,256	53,928	64,515	1,006,820
1946-47	296,401	263,140	199,409	36,708	40,267	56,211	892,136

(a) These figures relate to the three State Hospitals and Homes only, at 31st December, 1947.
 (b) Includes £18,992 in Victoria, £11,980 in Queensland, £109 in South Australia and £2 in Western Australia, covering such items as purchases of land, cost of new buildings and additions to buildings.

§ 2. Orphanages, Industrial Schools, etc.

1. **General.**—The methods of caring for orphans and neglected children differ extensively, inasmuch as some of the children are more or less segregated in orphanages and industrial schools, while others are boarded-out with their mothers or female relatives or with approved foster-mothers. The children in orphanages and similar institutions may receive, in addition to primary education, some craft training. In all cases employment is found for the children on their discharge from the institution, and they remain for some time under the supervision of the proper authorities. The conditions under which orphans, neglected children and children boarded-out live are subject to frequent departmental inspections.

2. **Principal Institutions.**—Particulars concerning the principal institutions in each State were published in earlier issues of the Official Year Book (*see* No. 22. p. 486).

3. **Transactions of State Departments.**—The following table summarizes the transactions of State Departments during 1947-48, in connexion with children under their control or supervision. In addition to neglected children, the figures include

uncontrollable and convicted children who are wards of a Government authority, as well as poor children whose parents obtain assistance from the Government without giving up the legal right of custody:—

CHILDREN UNDER GOVERNMENT AUTHORITY : SUMMARY, 1947-48.

Particulars.	N.S.W.	Vic. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
<i>A. Children maintained or subsidized by the State.</i>							
In State shelters, industrial schools, reformatories, etc.(b)	1,293	223	1,048	213	39	59	4,905
In licensed or approved institutions .. ..	..	1,350					
Bearded-out—							
With own mothers ..	7,329	2,858	3,340	87	30	..	13,644
With licensed foster-mothers, guardians, relatives and friends	1,529	570	335	5,263	227	167	8,091
Total children maintained or subsidized by the State	10,151	5,001	4,723	5,592	740	433	26,640
<i>B. Children not maintained or subsidized by the State.</i>							
In licensed or approved institutions	1,694	..	..	34	686	..	2,414
Boarded out	221	..	..	1,232	403	..	1,856
On probation (from Institutions or Children's Courts)	2,180	1,260	95	345	227	..	4,107
In service or apprenticed	106	264	310	185	59	..	924
Adopted or otherwise placed	330	110	18	652	120	..	1,230
Total children not maintained or subsidized by the State	4,531	1,634	423	2,448	1,495	..	10,531
Total children under State control or supervision ..	14,682	6,635	5,146	8,040	2,235	433	37,171
<i>Gross cost of children's relief</i>	£	£	£	£	£	£	£
1947-48	537,972	222,335	182,068	112,178	24,756	14,032	1,094,241
<i>Receipts from parents' contributions, etc. ..</i>	36,218	21,657	14,029	17,713	10,484	1,788	101,889
<i>Net cost to State,</i>							
1947-48	501,754	200,678	168,939	94,465	14,272	12,244	992,352
1946-47	452,147	180,560	163,452	86,770	10,492	9,949	903,379

(a) Year ended 31st December, 1947.
4,989 children in receipt of ration relief.

(b) Includes inmates of hospitals.

(c) Includes

The total expenditure on children's relief in the foregoing table shows considerable variation amongst the States owing to the different methods of treating assistance to mothers with dependent children. In South Australia, Western Australia and Tasmania large amounts have been excluded from the total expenditure on this account owing to the difficulty of obtaining separate amounts for allowances made in respect of the dependent children only.

§ 3. Protection of Aborigines.

For the protection of the aboriginal Australian race there are institutions, under the supervision of Aborigines Boards, where these people are housed and encouraged to work, the children receiving elementary education. The work is usually carried on at mission stations, but many of the natives are nomadic, and receive food and clothing when they call, whilst others but rarely come near the stations. The native race is extinct in Tasmania. The expenditure from Consolidated Revenue in 1947-48 was as follows; figures in brackets are for year 1946-47 :—New South Wales, £68,952 (£57,588); Victoria, £6,464 (£6,077); Queensland, £184,838 (£154,656); South Australia, £41,752 (£40,862); Western Australia, £102,915 (£85,001); Northern Territory, £45,792 (£39,303); Australian Capital Territory, £1,140 (£575); total for Australia, £451,853 (£404,092). At a census of aborigines taken at 30th June, 1944 in all States except New South Wales the number of full-blood and half-caste aborigines living in supervised camps was as follows (particulars for New South Wales as at 30th June, 1941 have been added) :—

ABORIGINES IN SUPERVISED CAMPS, 30th JUNE, 1944.

Particulars.	New South Wales. (a)	Victoria.	Queensland.	South Australia.	Western Australia.	Northern Territory.	Total. (b)
Full-bloods ..	373	18	4,298	726	4,450	8,361	18,227
Half-castes ..	4,114	229	2,271	1,118	1,698	449	9,980

(a) At 30th June, 1941.

(b) Includes one full-blood and 101 half-castes in the Australian Capital Territory.

Particulars regarding the total number of aborigines in each State will be found in Chapter XIII. "Population".

§ 4. Royal Life Saving Society.

In each of the State capitals, "centres" of the Royal Life Saving Society have been established, and in some States sub-centres have also been established in the larger provincial districts. In 1934 an Australian Federal Council of this Society was formed with head-quarters at Melbourne, and each State centre, or branch, as it is now called, is controlled by the new organization. Saving of life from drowning and other forms of asphyxiation is the object of the Society, and its immediate aims are (a) educative and (b) remedial. The encouragement of swimming and life-saving in schools, colleges, clubs, etc., will bring about a more widespread knowledge of these necessary matters, and there is increasing provision of life-belts, reels, lines, warning provisions, and other first-aid appliances on ocean beaches, wharves and other suitable places. Numerous certificates of proficiency in various grades are issued annually after examination throughout Australia, the number for the individual States for 1947-48 being :—New South Wales, 8,092; Victoria, 6,516; Queensland, 1,938; South Australia, 758; Western Australia, 1,956; Tasmania, 874; and Fiji, which comes under the control of the Australian Federal Council, 662.

§ 5. Royal Humane Society.

The Royal Humane Society of Australasia has for its objects (a) to grant awards for skill, promptness and perseverance in life-saving, where the rescuer has risked his or her life; (b) to provide assistance in cases of danger and apparent death; (c) to restore the apparently drowned; (d) to collect and circulate the latest information regarding approved methods and apparatus for life-saving. Awards of medals and certificates are made, numbering about 100 annually.

§ 6. Other Charitable Institutions.

Owing to the variety of name and function of other charitable institutions it has been found impracticable to give detailed results. The aid given in kind—food, clothing, tools of trade, etc.—is considerable, whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity, to indoor treatment over long periods in those that exist for the relief of the aged and the infirm. The institutions not so particularized include asylums for the deaf, dumb and blind, infant homes, homes for the destitute and aged poor, industrial colonies, night shelters, crèches, rescue homes for females, free kindergartens, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bush fire, flood and mining accident relief funds, etc.

CHAPTER X.

THE TERRITORIES OF AUSTRALIA.

GENERAL.

The Territories under the control of Australia are: The Northern Territory the Australian Capital Territory; Papua (formerly British New Guinea); Norfolk Island; the Territory of New Guinea (under Trusteeship Agreement with the United Nations); Nauru (under Trusteeship Agreement with the United Nations); the Territory of Ashmore and Cartier Islands; and the Australian Antarctic Territory.

Under the Ashmore and Cartier Islands Acceptance Act 1933 the Commonwealth Government accepted these islands from the British Government. They were administered by Western Australia until July, 1938, when the Act was amended to annex them to the Northern Territory.

The Australian Antarctic Territory, estimated area 2,472,000 square miles of a total area of approximately 5,000,000 square miles for the Antarctic Continent, was established by an Order in Council dated 7th February, 1933, which placed under the control of the Commonwealth of Australia that part of the Territory in the Antarctic Seas which comprises all the islands and territories, other than Adélie Land, situated south of the 60th parallel of south latitude and lying between the 160th and 45th meridians of east longitude. The Territory was accepted by the Commonwealth of Australia on 24th August, 1936, when the Antarctic Territory Acceptance Act 1933 came into force by proclamation issued by the Governor-General.

The results of the census of the Territories at 30th June, 1947, may be found in the separate Census bulletins and parts published by this Bureau.

In the Territories of Papua, Norfolk Island and Nauru. Australian currency is used. In the Territory of New Guinea, however, local coins consisting of silver shillings, cupro-nickel sixpences and threepences, and bronze pennies are used, supplemented by Australian currency.

THE NORTHERN TERRITORY.

§ 1. Post-war Activity.

By June, 1948, the Northern Territory had almost returned to normal following the 1939-45 War. New plans for expansion and development led to considerable activity throughout the Territory. Intensified interest overseas stimulated a general programme of expansion in the pastoral, mining and other industries. A plan for a new town on the existing site of Darwin was approved and building was commenced almost immediately. There was an influx of skilled and unskilled workers into Darwin to engage in work connected with the town plan, and departmental staffs increased. By this time, the population of Darwin exceeded 5,000.

For information regarding the return of civil activity in Darwin, see *Official Year Book No. 37*, p. 326.

§ 2. Area and Population.

1. *Area*.—Upon the extension of New South Wales westward to the 129th meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands it was transferred to the Commonwealth on 1st January, 1911. The total area is 523,620 square miles, or 335,116,800 acres—about six times as large as Victoria.

2. *Population*.—(i) *Europeans*. At the census taken in 1881 there were only 670 Europeans in the Territory. The number increased slowly, reaching 3,767 persons in 1918. At the census of 1933 the white population had decreased to 3,306. This number, however, was 34.5 per cent. greater than the figure at the census of 1921. At the census of 1947 it had risen to 9,116, an increase of 176 per cent. on the 1933 figures.

(ii) *Non-Europeans*. The number of full-blood non-Europeans, excluding Australian aboriginals, in the Northern Territory on 30th June, 1947 was 388, of whom 250 were Chinese, the remainder being mainly Filipinos (47), Fijians (23), Japanese (21), and Malays (20). There were at one time over 4,000 Chinese in the Territory.

The half-caste population recorded at the census of 1947 numbered 1,364, of whom 1,247 were half-caste Australian aboriginals. Corresponding figures at the 1933 census were, respectively, 800 and 743.

(iii) *Total Population*. The estimated population at 31st December in each of the years 1939 and 1944 to 1948, revised in accordance with the results of the 1947 census, is given in the following table :—

NORTHERN TERRITORY : POPULATION (EXCLUDING FULL-BLOOD ABORIGINALS).

31st December.			Males.	Females.	Total.
1939	..	..	5,136	2,151	7,287
1944	..	..	7,235	3,242	10,477
1945	..	..	7,252	3,294	10,546
1946	..	..	7,263	3,379	10,642
1947	..	..	7,403	3,588	10,991
1948	..	..	8,065	4,429	12,494

The population at the Census of 30th June, 1947, was 7,378 males and 3,490 females, total 10,868.

(iv) *The Aboriginals*. The total number of full-blood aboriginals at 30th June, 1948, was estimated at 14,000, of whom approximately 3,000 were in regular employment. Part-aboriginals numbered about 2,000. There are fifteen "aboriginal" reserves, comprising an area of approximately 70,000 square miles. (*See also* Chapter XIII, "Population".)

§ 3. Legislation and Administration.

On 1st January, 1911, the Territory was transferred by South Australia to the Commonwealth. The terms are outlined in Official Year Book No. 15, p. 940. By the Northern Australia Act 1926, the Territory was divided into two parts, Central Australia and North Australia, separated by the 20th parallel of south latitude, each administered by a Government Resident. In addition, Advisory Councils and a Development Commission were provided for. The Act of 1926 was repealed by the Northern Territory (Administration) Act 1931. The administration of the Territory was placed in the hands of an Administrator, residing at Darwin, assisted by a Deputy

Administrator, residing at Stuart (Alice Springs). The designation of the latter office was later changed to that of District Officer. The Governor-General was empowered to make ordinances having the force of law in and in relation to the Territory, subject to disallowance by either House of the Commonwealth Parliament (repealed by 1947 amendment).

An amendment to the Northern Territory (Administration) Act, assented to in June, 1947, enabled the Northern Territory to set up a Legislative Council. The Council consists of the Administrator, seven official members (nominees of the Administrator) and six members elected from five districts (two from Darwin district). The normal term of office of the elected members is three years. The Council is able to make ordinances for the Territory, but it must submit each one to the Administrator for assent. The Administrator may, or may not, assent, or he may refer the ordinance to the Governor-General. The Governor-General may also disallow any ordinance assented to by the Administrator within six months from the date of assent. Ordinances that (1) grant or dispose of Crown lands, (2) make leases or grants of land or money, donations or gratuities to the Administrator, or (3) relate to aborigines or aboriginal labour, must contain a clause suspending their operation until the signification of the Governor-General's pleasure thereon. All ordinances must be laid before Parliament after assent. Money votes may be proposed in the Council only by the Administrator himself, or by his permission or direction.

The Territory elects a member to the House of Representatives, who may take part in debates, but may not vote, except on a motion for the disallowance of any ordinance of the Northern Territory or on any amendment of any such motion.

§ 4. Physiography.

1. **Tropical Nature of the Country.**—The Territory is within the torrid zone, with the exception of a strip $2\frac{1}{2}$ degrees wide which lies south of the Tropic of Capricorn.

2. **Contour and Physical Characteristics.**—The low flat coast-line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and ironstone form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries.

The principal features of the coast-line are enumerated in Official Year Book No. 1, p. 66; the rivers in No. 2, p. 76; the mountains in No. 3, p. 67; the lakes in No. 4, pp. 77, 78; the islands in No. 5, pp. 71, 72; and the mineral springs in No. 6, p. 65.

Inland, the country generally is destitute of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply of the interior systems. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

§ 5. Climate, Fauna and Flora.

1. **The Seasons.**—There are two main climatic divisions—the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer months. Fuller particulars appear in Official Year Book No. 6, p. 1116.

2. **Fauna.**—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water turtles, snakes (mostly non-venomous) and frogs abound. There are many varieties of freshwater fish and littoral mollusca. Butterflies and beetles are strongly represented. The white ant is a pest, anthills in the Territory sometimes

attaining great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. Buffalo formerly existed in large herds, but their number has been greatly reduced by indiscriminate shooting. Buffalo shooting is now controlled.

3. *Flora*.—The vegetation is North Australian in type, but a number of the forms belong to the Malayan and Oceanic regions. The timber trees are not of great commercial value, but in the coastal regions tropical vegetation grows luxuriously to the water's edge. In the north, cypress pine, bloodwood and paperbark timbers are now cut and milled for local building purposes. These three timbers are resistant to termites. On the wide expanses of plain country in the interior there is little vegetation, the principal orders represented being:—*Euphorbiaceae*, *Compositae*, *Convolvulaceae*, *Rubiaceae*, *Goodenoviaceae*, *Leguminosae*, *Utricaceae*.

Fuller particulars regarding fauna and flora are given in Official Year Book No. 6, pp. 1116-7.

§ 6. Production.

1. *Agriculture*.—Up to the present agriculture has made little progress in the Territory, although it has been proved that rice, tobacco, coco-nuts, mangoes, bananas, cotton, various fodder plants, and peanuts can be successfully grown. Expense of harvesting is, at present, an obstacle to the economic production of rice, and until labour-saving machinery is procured it cannot be produced with profit. There is a large stretch of first-class coco-nut land on the coast, but hitherto planting has not been attempted on a commercial scale. For the encouragement of primary production a Primary Producers' Board was established in 1931. After the end of the 1939-45 War, returned servicemen and others began to grow with some initial success vegetables, fruit and other crops in the Darwin environs and as far south as Katherine. Vegetables grown were of consistently good quality and found ready local markets. In 1949 a group of Queensland farmers began an experiment in large-scale sorghum growing near Newcastle Waters. It was expected that results would be known by May, 1950, when the first harvest was due.

2. *Pastoral Industry*.—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock was brought into the Macdonnell Range country from South Australia. Six years later cattle were moved from Queensland to the northern parts of the Territory, and in 1879 Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. The cattle industry, however, progressed steadily.

Cattle exported during 1947-48 numbered 113,181—58,953 to Queensland, 41,225 to South Australia, and 13,003 to Western Australia. Sheep exported totalled 1,478—all to South Australia. Importations of live-stock were:—bulls, 572; other cattle, 2,770; stallions, 4; other horses, 339; rams, 20; other sheep, 2,445.

The estimated number of live stock in the Territory at the end of the years 1939 and 1944 to 1948 is given in the table hereunder:—

NORTHERN TERRITORY: LIVE STOCK.

31st December—	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.	Donkeys.	Mules.
1939	32,721	922,581	38,587	483	20,335	331	1,443	366
1944	31,803	984,370	29,269	146	11,384	284	1,167	426
1945	31,883	960,039	18,561	407	12,810	298	1,275	471
1946	30,019	972,990	28,005	208	11,914	296	1,621	513
1947	32,318	991,429	19,058	680	15,260	193	1,232	632
1948	33,197	1,052,811	25,791	384	14,045	173	1,192	609

3. **Hides and Skins.**—The number of hides and skins exported from the Territory during 1947-48 was as follows:—buffalo, 8,250; cattle, 3,905; sheep, 2,694; crocodile, 1,271; horse, 11; and goat, 9. In addition, a considerable number of kangaroo skins were exported, but exact figures are not available.

4. **Mining.**—(i) *General.* Alluvial gold-digging in the Northern Territory commenced in 1869, and up to the end of 1880 gold to the value of £79,022 had been produced. In 1881 gold production from alluvial deposits reached its maximum, the value for that year being £111,945. During the following years it fluctuated considerably but as long as the alluvial deposits lasted the output was satisfactory. In the transition period from alluvial to reef mining the industry declined considerably. The production of metals other than gold has suffered on account of the vagaries of prices, and the high cost of transport and of white labour. Owing to the exceptionally high price, the search for gold was stimulated and production increased annually from 1931 to 1940, but decreased thereafter owing to lack of manpower occasioned by the war. Since the end of the war, production has recovered rapidly. The Warramunga Goldfield, of which Tennant Creek is the centre, has been the principal producing goldfield and gives every indication of increasing production for a number of years. The necessity for satisfying Australian requirements of mica of strategic quality led to the regional development of the Harts Range mica fields, where roads and water supplies, hitherto unknown in this part of the Territory, were made and established, and as a result, the mica fields were better exploited in the war years. Development has continued under a scheme of Government assistance. Production of wolfram concentrates also continues. The demand for tantalite for radar work and non-corrosive surgical equipment resulted in a production valued at £1,043 in 1943, when the Commonwealth Government purchased concentrates for forwarding to the United States of America. The use of ochre for camouflage paints caused an increase in production from the Rumbalara deposits. Tin concentrates were produced from the Finnis River area and the Marantboy tinfield.

(ii) *Mineral Production.* The following table shows the value of mineral production, for the years 1944 to 1948 compared with 1939:—

NORTHERN TERRITORY : MINERAL PRODUCTION.

(£.)

Year.	Gold.	Tin Concentrates.	Ochre.	Copper Ore.	Mica.	Wolfram.	Tantalite.	Total Value all Minerals. (a)
1939 ..	163,414	4,487	607	2,248	15,539	58,183	..	244,478
1944 ..	57,803	2,086	5,090	1,878	26,621	31,583	962	120,025
1945 ..	76,811	5,026	2,078	3,812	44,955	42,937	578	176,197
1946 ..	105,376	3,228	1,983	6,282	27,969	21,696	..	166,543
1947 ..	118,563	4,698	2,564	..	62,547	41,020	45	229,437
1948 ..	163,482	12,055	2,374	7,370	75,816	30,780	889	294,173

(a) Includes bismuth—£2 in 1944 and £9 in 1946; and silver-lead ore—£1,407 in 1948.

The value of all minerals produced to the end of 1948 was approximately £6,366,000.

In 1934 the Governments of the Commonwealth and the States of Queensland and Western Australia agreed to co-operate in the conduct of a geological and geophysical survey of certain areas in the northern parts of Australia, including the Northern Territory. More detailed reference to the survey, which was completed in 1940, appears in Official Year Book No. 35, page 744.

5. **Pearl and Other Fisheries.**—In 1884 mother-of-pearl-shell was discovered in the harbour of Port Darwin. Difficulty in working, principally through heavy tides and muddy water, retarded the development of the industry for many years. The production of pearl-shell has declined rapidly since 1937-38. The production for 1939-40 amounted to only 179 tons, valued at £14,350, compared with 804 tons, £67,000, in 1937-38 and

410 tons, £31,500, in 1938-39. In view of the importance of the industry it was included in the terms of reference of the Northern Australia Development Committee. A conference was held in Melbourne in March, 1946, between representatives of the Western Australia pearl-shell industry, the Northern Territory Administration, the Western Australian and Commonwealth Governments, as a pearling sub-committee, which reported and made recommendations to the Northern Australia Development Committee. The sub-committee considered the following matters—labour, boats and equipment, financial assistance, the marketing problem and economic survey, institution of administrative arrangements and biological investigations. The recommendations were placed before the Minister for the Interior by the Northern Australia Development Committee. On the question of labour the Committee recommended that approval be given for the admittance to Australia of indentured men while the possibility of training and employing alternative labour was being investigated, and suggested that the whole position should be reviewed in five years. The depleted condition of the known beds and the depressed market were responsible for fewer Japanese vessels competing with local vessels during 1939-40.

In 1947-48, eleven vessels resumed fishing for pearl-shell. Inexperienced crews and initial difficulty in locating good deposits of shell are given as the reasons for a disappointing return—45 tons to December, 1948. Owing, however, to the high price (up to £600 per ton for first grade shell) offering at that time, the value of the catch is estimated at £22,500. An agreement between master pearl-ers and oversea buyers, in 1949, fixed the top price for first grade shell at £325 per ton for the next three years. This represents a drop of £150 to £200 per ton on the 1947-48 price.

Darwin continues to provide a firm and ready local market for fish. The lack of suitable refrigerating plants on the fishing-boats is responsible for the deficiency of regular supplies of fish except in limited quantities obtained from traps close to the town.

§ 7. Land Tenure.

1. **General.**—A description of the system of land tenure in force in the Territory in 1928 was given in Chapter V. "Land Tenure and Settlement", Official Year Book No. 22. This description has been brought up-to-date in the following three paragraphs.

2. **Pastoral, Agricultural, etc., Leases.**—(i) *Pastoral Leases.* A pastoral lease may be granted for such term, not exceeding 42 years, as the Administrator determines. The rental for the first period is fixed by the Administrator, and is subject to re-appraisal on such dates as are specified in the lease or as are prescribed. Upon application by a lessee who proposes to develop his lease extensively, the Administrator may grant special terms and conditions to enable the development of the lease, and may grant an extension of the lease for a term not exceeding 30 years.

(ii) *Pastoral Development Leases.* These leases may be granted for periods up to 50 years and may be subject to special conditions in order to secure the development of the land.

(iii) *Agricultural Leases.* Agricultural lands are classified, and the maximum area which may be included in any one lease is as follows :—Division A, Cultivation Farms, Class 1, 1,280 acres, Class 2, 2,560 acres : Division B, Mixed Farming and Grazing, Class 1, 12,800 acres, Class 2, 38,400 acres. Agricultural leases are granted in perpetuity, and the rent for the first period is fixed by the Administrator, and is re-appraised every 21 years. The lessee must—(a) in the case of lands for mixed farming and grazing, stock the land to the extent prescribed by the regulations and keep it so stocked ; (b) establish a home within 2 years and reside on the leased land for 6 months in each year in the case of land for cultivation, and for 4 months in each year in the case of land for mixed farming and grazing ; (c) cultivate the land to the extent notified by the Administrator ; and (d) fence the land as prescribed.

(iv) *Leases of Town Lands.* Except in Darwin, leases of town lands are granted in perpetuity, the rental being fixed every 14 years. Such leases must, in the first instance, be offered for sale by public auction, and if not so sold, may be allotted by the Administrator to any applicant, at the rental fixed by the Administrator. The lessee must erect, within such time as is notified, buildings to the value specified in the conditions of sale. Leases in the town of Darwin are granted for periods up to 99 years under the Darwin Town Area Leases Ordinance 1947. Short-term leases of up to 5 years' duration are also granted in the Darwin area under the Darwin Short-term Leases Ordinance 1946.

(v) *Miscellaneous Leases.* The Administrator may grant a lease of any portion of Crown lands, or of any dedicated or reserved lands, for any prescribed or approved purpose. Such leases are for a term not exceeding 21 years, and may be offered for sale by public auction, or granted to an applicant at an annual rental fixed by the Administrator.

(vi) *Leases of Garden Lands.* Leases of garden lands may be granted over areas within 10 miles of a town, provided the Administrator has declared the area as garden lands.

(vii) *Grazing Licences.* Licences may be granted to graze stock on Crown lands for such period, not exceeding one year, as is prescribed, and at the rent and on the conditions specified.

(viii) *Occupation Licences.* Licences may be granted for any period not exceeding 5 years, and on specified rentals and conditions, for the purpose of drying or curing fish, or for any manufacturing or industrial purpose, or for any prescribed purpose.

(ix) *Miscellaneous Licences.* The Administrator may grant licences for miscellaneous purposes for a period not exceeding 12 months on prescribed terms and conditions.

(x) *Leases to Aborigines.* The Governor-General may grant to any aboriginal native, or to the descendant of any aboriginal native, a lease of Crown lands not exceeding 160 acres for any term of years upon such terms and conditions as he thinks fit.

3. *Mining Leases, etc.*—(i) *General.* Mining generally is governed by the Mining Ordinance 1939–1947, and special Ordinances have been promulgated by the Commonwealth respecting mining for mineral oil and coal, encouragement of mining, inspection and regulation of mining and inspection of machinery.

(ii) *Holdings under Miners' Rights.* The fee for a miner's right is 5s. for 12 months from the date of issue, and a holder thereof is entitled to occupy Crown lands for mining purposes, to construct races, to divert water, to reside on his holding, etc.

(iii) *Gold-mining Leases.* The area of a gold-mining lease must not exceed 20 acres, and the term is 21 years, renewable for a further 21 years. The rent is 2s. per acre per annum. A royalty of 3d. in the £ on the gross value of all gold and minerals won must be paid, and leases must be worked constantly by not less than 2 men for the first 12 months and thereafter by not less than 1 man for every 5 acres with a minimum of 2 men, unless exemption is obtained.

(iv) *Mineral Leases.* Mineral leases may be granted in blocks not exceeding 40 acres each. A mineral lease is issued for the same term as a gold-mining lease, with similar right of renewal. The rent is 1s. per acre per annum, and the royalty on minerals is the same as in the case of a gold-mining lease, except that payment was suspended as a war-time measure, and such temporary suspension still obtains.

(v) *Dredging Claims.* These claims may be granted for dredging for gold or minerals at a rental of 2s. per acre per annum. The maximum area of each claim must not exceed 300 acres, and 6 months after registration the holder must employ continuously on the claim not less than 3 men and fully manned machinery valued at not less than £1,000.

(vi) *Mineral Oil and Coal Licences.* A licence to search for mineral oil or coal, or for both, may be granted over an area not exceeding 1,000 square miles for a period of 5 years on payment of an annual fee of £10. At least 4 white men must be employed for not less than 6 months in each year. A holder of a mineral oil licence who discovers payable mineral oil on the land held under his licence has a preferential right to a mineral oil lease of 160 acres, together with a reward area of 640 acres thereon. A discoverer of coal in payable quantities has a preferential right to an area of 640 acres as a coal lease.

(vii) *Mineral Oil and Coal Leases.* Leases may be granted for a period of 21 years, renewable for a further 21 years, for mining for mineral oil or coal, the maximum areas being (a) for mineral oil, 160 acres; and (b) for coal, 640 acres. In the case of mineral oil and coal, the annual rent is 1s. per acre, and a royalty of 5 per cent. on the gross value of all crude oil obtained is payable; the lessee must also work the land to the satisfaction of the Minister. In the case of coal, the royalty and conditions are fixed by regulation.

(viii) *Business and Residence Areas.* A business area may be granted at the prescribed fee and authorizes the holder to occupy on a gold-field or mineral field, for the purpose of residence and carrying on his business, an area not exceeding 1 acre, provided that when the area is for residence only it shall not exceed one-quarter of an acre.

(ix) *Garden Areas.* The warden may grant market garden areas upon any gold-field or mineral field for the purpose of growing fruit or other garden produce. The conditions as to rent, etc., are as prescribed, but the area of each garden area must not exceed 5 acres.

4. *Areas Occupied, Reserved, etc.*—Areas occupied, reserved and unoccupied at 30th June, 1948, totalled 335,116,800 acres, 455,321 of which were alienated and 157,595,520 leased or held under licence (pastoral, 115,144,320; other tenures 42,451,200). Reserves amounted to 45,451,833 acres, and 131,614,126 acres were unoccupied and unreserved. Land revenues collected for the year amounted to £35,929.

§ 8. Commerce, Shipping and Air Services*.

1. *Trade.*—No record is kept of the trade between the States and the Territory. The value in Australian currency of the direct oversea imports and exports for 1901 and for the years 1938–39, 1940–41, 1941–42 and 1945–46 to 1947–48 is given hereunder:—

NORTHERN TERRITORY: OVERSEA IMPORTS AND EXPORTS.

(£.)

Items.	1901.	1938–39.	1940–41.	1941–42. (a)	1945–46.	1946–47.	1947–48.
Imports	37,539	36,831	106,079	175,211	196,714	89,204	277,779
Exports	29,191	12,729	24,865	13,341	221,406	17,098	73,239

(a) July to April.

2. *Shipping.*—The Territory is dependent for its shipping facilities chiefly on the services of vessels trading between the Eastern States and Singapore. In addition to pearlers and other small craft, larger vessels make occasional visits, while a periodic service between Fremantle and Darwin is carried out by vessels belonging to or under charter to the Western Australian State Shipping Service. The following figures show

* Owing to the war the port of Darwin was closed as a Customs station from April, 1942—when Customs officers were withdrawn—till July, 1945, and for this period no details of trade and of shipping movements are available for the port, which remained purely military in character and under the control of the Defence authorities.

the number and net tonnages of oversea and interstate vessels which entered at and cleared from the port of Darwin during the years 1938-39, 1940-41, 1941-42 and 1945-46 to 1947-48 :—

NORTHERN TERRITORY : SHIPPING.

Year.	Entered.		Cleared.	
	No. of Vessels.	Net Tonnage.	No. of Vessels.	Net Tonnage.
1938-39	161	181,961	172	179,422
1940-41	93	213,710	89	209,963
1941-42 (a)	81	207,970	82	206,378
1945-46	9	31,164	8	25,347
1946-47	23	50,890	23	48,136
1947-48	28	54,067	29	55,854

(a) July to April.

3. **Air Services.**—Darwin is the first port of arrival in Australia for virtually all planes from Europe and Asia. Qantas Empire Airways Ltd. (under contract to the Commonwealth Government) operates, through Darwin, a Sydney-Singapore-London passenger service four times a week; a freight service to London once monthly; a passenger-freight service to Hong Kong once monthly; and a regular courier service to Japan. British Overseas Airways Corporation operates a London-Singapore-Sydney service four times weekly, and Australian National Airways, in conjunction with Air-Ceylon, operates a service to London once monthly. Both these services call at Darwin. Regular inland services calling at Darwin are Trans-Australia Airlines (Adelaide-Darwin and Brisbane-Darwin), and MacRobertson-Miller Aviation, which runs a regular service between Darwin and Perth. Now established as a first-class international airport, Darwin is also visited by aircraft from many other overseas airlines, besides privately-owned machines. For further information see Chapter V.—Transport and Communication, H. Aviation.

§ 9. Internal Communication.

1. **Railways.**—Under the agreement made between the Commonwealth and the State of South Australia for the transfer of the Northern Territory, which was ratified by the Northern Territory Acceptance Act 1910, the Commonwealth was to construct the Northern Territory portion of the transcontinental railway line (connecting Adelaide and Darwin via Port Augusta).

The northern line from Adelaide terminates at Alice Springs, about 192 miles north of the southern boundary of the Territory. The Commonwealth Government acquired on 1st January, 1911, the property in the line from Port Augusta to Oodnadatta (478 miles), and on 1st January, 1926, the control thereof was transferred to the Commonwealth Railways Commissioner. The line from Darwin to Katherine River, about 200 miles, has been extended as far as Birdum, 316 miles from Darwin.

The Clapp plan for the standardization of Australian railways recommended, *inter alia*, the construction of a standard gauge (4 ft. 8½ in.) strategic and developmental railway between Dajarra (Queensland) and Birdum, and the conversion to standard gauge of the Birdum–Darwin line (see Chapter V.—“Transport and Communication,” B. Railways, § 1 General), but not the conversion of the Port Augusta–Alice Springs line nor the construction of a 4 ft. 8½ in. line between Alice Springs and Birdum. Provision for both of the last two projects, however, was included in the Railway Standardization Agreement Act 1946, involving the Commonwealth and the States of New South Wales, Victoria and South Australia. The Birdum–Dajarra project is dependent on the completion of the Queensland section of the general plan.

2. **Roads.**—During the war roads were built connecting Alice Springs with Darwin, and Mount Isa (Queensland) with Tennant Creek. The first of these roads, known as the North–South Road or Stuart Highway, is 950 miles long, and runs via Larrimah and Tennant Creek. The Mount Isa–Tennant Creek Road (Barkly Highway) is 403 miles long. Both were used extensively during the war, the Stuart Highway, in particular, experiencing very heavy and continuous traffic. Since the war, the Stuart Highway has been used continuously as a means of transporting foodstuffs and other supplies to Darwin and northern centres, and is now the main route for overland tourists and travellers from the southern States to Darwin. The introduction of road trains for the rapid transport of fat cattle and other stock to State markets has further proved the value of both the Barkly and Stuart Highways as national assets. Both roads have good water bores and communications. As part of the post-war plan to increase beef production in the Territory a new network of roads is to be constructed and survey work has already commenced (1949).

3. **Posts.**—Postal communication is maintained by a regular service of vessels between the Territory and the Eastern States. In addition, the vessels belonging to the Western Australian State Shipping Service give a periodic service between Fremantle and Darwin. Mail is carried between the capital cities of Australia and Darwin by the airway companies operating in each State. Inland, the northern part of the Territory receives its mail via Darwin or by means of the aerial services, and the southern districts are served via Adelaide.

4. **Telegraphs.**—The transcontinental telegraph line, covering a length of 2,230 miles, was completed on 22nd August, 1872, at a cost of nearly £500,000. The line runs in a northerly direction from Adelaide to Darwin, whence telegraphic communication is provided with Asia and Europe, via Banjoewangie (Java), Singapore and Madras. Between Darwin and Banjoewangie the submarine cable is duplicated.

Long-distance telephone communication between Darwin and the other capital cities of Australia was established after the outbreak of war in the Pacific.

High-power wireless stations have been constructed by the Commonwealth Government at Wave Hill in the Territory, and at Camooweal, just over the eastern boundary, in Queensland.

§ 10. Educational Facilities.

Education in the Northern Territory has been under the control and direction of the South Australian Education Department since January, 1945. An officer of the Department is on loan to the Northern Territory Administration as a full-time staff officer on the Education Branch. This officer, designated Assistant Supervisor of Education, Northern Territory, works in close co-operation with the Administrator.

The number of teachers in the Northern Territory in 1948 was 24—all officers of the South Australian Education Department.

When the war ended, the only schools functioning in the Northern Territory were Tennant Creek, with 30 pupils, and Alice Springs, with 120. Katherine and Pine Creek re-opened in August, 1945, and the school at Darwin re-opened in May, 1946.

Enrolments at the end of 1948 were:—Alice Springs Higher Primary School, 288 primary, 36 secondary; Alice Springs Convent School (Roman Catholic), 100.6; Darwin Higher Primary School, 440.44; Darwin Convent School (Roman Catholic), 147.20; Tennant Creek Public School, 62 primary; Katherine Public School, 42 primary; and Pine Creek Public School, 30 primary. In addition, 92 children were enrolled in correspondence classes conducted through the South Australian Education Department for Northern Territory children who are too isolated to attend established schools. Including correspondence pupils, the Northern Territory had a total school enrolment of 1,307 children at December, 1948.

About 40 per cent. of Darwin and Alice Springs schoolchildren are in the lower grades (1 and 2), and on the present rising birth-rate it is estimated that by 1954 Alice Springs will have a school population of approximately 600 and Darwin 800. Plans have been prepared for new schools at Darwin and Alice Springs. It is proposed to build a "comprehensive" school at Alice Springs to take children at the infant, primary and secondary stages. A site of 11 acres has been set aside and a further 20 acres has been reserved for agricultural education. Secondary education was established at Alice Springs in 1945, with facilities for instruction in general and commercial courses to the Intermediate standard of the University of Adelaide. The secondary block in the proposed new school will have practical rooms including woodwork, sheet metalwork, domestic arts, science laboratories, millinery, dressmaking, library and commercial.

Alice Springs is now regarded as the educational centre for the greater part of the Northern Territory. At the end of 1948 there were 93 boarders attending the Alice Springs Higher Primary School and a further 50 boarders at the Convent School. These came from remote areas of the Northern Territory and from places as far away as Wyndham and Derby (W.A.), Mount Isa (Q.), Oodnadatta (S.A.) and Darwin. Boarding students at Alice Springs are accommodated at hostels provided by Methodist, Church of England and Roman Catholic Church organizations. A boarding allowance (£30 primary and £40 secondary) for each child is paid by the Commonwealth Government to assist parents to keep their children at school. In addition, six exhibitions are offered annually on the results of the Intermediate examination. These exhibitions carry a subsistence allowance of £50 a year, £5 for books and return fares between home and school once a year, and are tenable at any approved secondary school in Australia.

Plans have been completed for a new primary school at Darwin, built on tropical lands. The new school will be erected on an 8.8 acre site in the town proper. This site has been specially allocated in the Darwin town plan. It is estimated that Darwin will have 100 secondary students by 1954 and consideration is being given to building a separate technical high school in the town. A site has been set aside in the town plan for this purpose. Because of the scattered nature of Darwin, transport is provided for school children, and more than 400 children are conveyed to school every day in special buses. At Alice Springs, 100 go to school each day in buses provided.

Approximately 30 per cent. of all children attending school in the Northern Territory are part-aboriginal. Relationships with other children are normal and their scholastic progress compares favourably with that of white children. A special school for full-blood aboriginal children was begun at Bagot, near Darwin, in February, 1949. Attendance at the school averages 10 to 25.

§ 11. Finance.

Revenue and expenditure for the Territory for the years 1938-39 and 1943-44 to 1947-48 are shown below :—

NORTHERN TERRITORY : REVENUE AND EXPENDITURE. (a)

(£.)

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
REVENUE.						
Taxation—						
Land and Income Tax	4,889	(b) 23	(b) 3	(b) 2	..	..
Probate and Stamp Duties	1,486	869	2,316	4,578	3,834	3,314
Medical Benefits Tax						
(Arrears) .. ..	..	III	IO	17	..	..
Rent and Rates	27,994	50,121	46,224	33,707	56,282	56,382
Electricity Supply	(d)	39,304	15,727	50,664	50,236	65,660
Railways—						
North Australia	50,471	822,582	819,884	174,371	58,140	37,549
Central Australia	137,521	1,736,783	1,045,423	710,648	395,377	383,630
Postmaster-General's Department	36,009	275,352	214,102	113,874	85,334	90,266
Miscellaneous	21,352	20,041	20,685	27,633	38,296	68,485
Total	279,722	2,945,186	2,164,374	1,115,494	687,499	704,686
EXPENDITURE.						
Territory Administration ..	209,017	128,358	139,178	174,507	280,100	377,928
Developmental Services ..	69,314	9,435	19,615	20,199	26,624	32,382
Postmaster-General's Department	25,423	46,740	45,608	53,931	75,581	95,472
Other Departments	4,994	5,739	7,256	25,151	135,578	144,960
Electricity Supply	4,970	60,155	46,260	28,333	73,125	85,428
Municipal Expenditure—						
Darwin and Alice Springs	(e)	951	1,600	7,223	26,053	27,680
Loss on Hostels in Northern Territory .. ..	..	..	..	..	..	9,897
Airmail Service Subsidy .. ..	..	2,650	3,463	4,500	4,500	4,595
Unemployment Relief	5,890	795	738	1,595	1,823	1,828
Shipping Subsidy	10,940	1,000	800	300	1,000	4,100
Rent, Repairs, Maintenance	16,973	25,138	9,288	37,097	203,109	104,236
Capital Works and Services ..	243,980	72,853	84,392	70,189	557,719	407,155
Interest	66,757	49,590	48,130	47,555	46,953	40,361
Sinking Fund	14,044	17,923	18,819	19,760	20,748	21,785
Railways—						
Working Expenses	269,560	1,507,249	1,301,494	803,940	491,474	541,006
Interest	274,537	250,791	244,470	232,051	230,096	210,512
Sinking Fund	51,966	66,061	69,320	72,583	76,177	79,978
Capital Works and Services ..	29,204	19,643	35,198	25,011	41,296	126,582
Total	1,297,569	2,265,071	2,075,719	1,623,925	2,291,956	2,321,885

(a) This table covers the transactions of the Commonwealth Consolidated Revenue Fund in relation to Northern Territory administration and the revenue and expenditure of Commonwealth business undertakings in the Northern Territory. Collections of general Commonwealth taxes (e.g. Income Taxes, Customs and Excise Duties, Sales Tax, etc.), previously included, and other revenue and expenditure in the Territory of a general nature (e.g., Pensions, etc.), are excluded. (b) Arrears. (c) Included with Territory Administration. (d) Included with Miscellaneous.

AUSTRALIAN CAPITAL TERRITORY.

1. **Introductory.**—In Official Year Books Nos. 4 and 5 information was given in Section XXXI. in regard to the events leading to the selection of the Australian Capital Territory and the necessary legislation and the progress of operations in connexion with the establishment of the capital city. The physiography of the Territory was dealt with extensively and topographical and contour maps accompanied the letterpress, as well as reproductions of the award-winning designs for the laying out of the city. On 12th March, 1913 the official ceremony to mark the initiation of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony the selection of "Canberra" as the name of the capital city was announced. The Seat of Government Acceptance Act 1909-1938 provides that the Territory shall be known as the Australian Capital Territory. (A special article contributed by Dr. F. Watson, entitled "Canberra Past and Present", appears on p. 454 of Official Year Book No. 24).

2. **Transfer of Parliament.**—On 9th May, 1927 Parliament House at Canberra was officially opened by His Royal Highness Albert, Duke of York, our present Monarch His Majesty King George VI., the occasion being the 26th anniversary of the opening of the first Parliament of the Commonwealth at Melbourne by His Royal Highness George, Duke of Cornwall and York—afterwards His Majesty King George V.—on 9th May, 1901. (For particulars of the opening ceremony see Official Year Book No. 21, p. 604.)

3. **Administration.**—In Official Year Book No. 18 a summary is given of the development of the administration prior to the taking over of the control of the Territory by the Federal Capital Commission, and in Official Year Book No. 22 a summary is given of the administrative activities of the Federal Capital Commission.

The administration of the Territory by the Federal Capital Commission was continued until 30th April, 1930, when the Seat of Government (Administration) Act 1924-1929 was repealed, and the powers and functions of the Commission reverted to the Government.

Since April, 1932 the general control of the Territory has been exercised by the Minister for the Interior, certain specific services, however, being undertaken by the Department of Health, the Department of Works and Housing, and the Attorney-General's Department.

4. **Progress of Work.**—The general progress of the work of construction up to the time the Territory was taken over by the Commission is outlined in Official Year Book No. 18. Later progress under the Commission is described in Official Year Book No. 22.

Since the reversion of the powers and functions of the Commission to the Government in 1930, there has been great development of works in the Territory, despite the halts in activity caused by the general reduction in Governmental expenditure during the depression years, and the necessity for restricting labour and materials to purely defence purposes during the war years. A summary of the work carried out to 30th June, 1946 is given in Official Year Book No. 37.

During the years 1946-47 and 1947-48, a marked increase in housing construction in the Australian Capital Territory was evident; seventy-five houses of a steel-framed partially-prefabricated type, designed for simple and speedy erection, were completed at Narrabundah in this period. These houses were the forerunners of several hundred of a similar design, built specially to accommodate workmen engaged on the Australian Capital Territory building construction programme. Dwellings under construction at 30th June, 1948, apart from the normal brick and timber types, included 114 steel and timber-framed demountables at Narrabundah, 48 brick flats at Griffith and 20 brick veneer War Service Homes at Griffith and Narrabundah, and the first of the "corner-shops", consisting of a shop with attached residence, at Ainslie and Narrabundah.

Contracts were let for the erection of 100 concrete-type houses. These were the first of a group of 300, at Turner and O'Connor, but construction had not begun at the close of the year.

In the years following the war, building operations in Canberra were accelerated in order to provide housing and office accommodation to meet the growing needs. It was realized that a large labour force would be required and accommodation to house such labour would necessarily have to be provided. The first step taken in overcoming this problem was the commencement of a number of workmen's hostels, these hostels to be timber-framed buildings with individual rooms, modern toilet accommodation, cafeteria-style dining rooms and recreation and canteen facilities. The old R.A.A.F. Technical

School at Eastlake was converted and extended to provide the first of these hostels, capable of housing 555 men, followed by Riverside Hostel at Barton, where accommodation was provided for 320 men. At 30th June, 1948, construction had also begun on hostels at Capital Hill and Ainslie, with additions scheduled for Riverside Hostel, a further three hostels planned at Reid, Turner and Capital Hill, and workmen's camps designed for siting at the Cotter River and Fairbairn Aerodrome.

A point of interest was the arrival in Canberra in December, 1946, of the first batch of tradesmen from Great Britain, these men being housed in Riverside Hostel on arrival. To ensure the availability of employees for continuous brick production at the Canberra Brickworks, hostel accommodation was provided at the Brickworks, together with an amenities block, etc.

In order to meet the demand for hostel accommodation for public servants, work was commenced on two permanent brick hostels at Turner and Barton. These hostels, of a high standard comparable with first-class hotels, will be centrally heated throughout and will provide accommodation for approximately 400 persons. In this regard, further accommodation was also provided by the erection of a timber-framed hostel at Parkes, housing 172 guests, with work in hand on additions thereto to bring the full capacity up to 240 guests.

To relieve the congestion of Departments already located in Canberra, work was begun on the construction of four timber-framed two-story office buildings at Barton, one of which was completed during 1947-48. The work on the Administrative Building at Parkes, a large and modern office unit, designed to accommodate 2,500-3,000 public servants, was also commenced in 1947-48. This building will be a reinforced concrete frame structure, equipped with all modern facilities, such as kitchen, cafeteria, recreation and rest rooms. At 30th June, 1948, work was well in hand on the excavations for the basement and sub-basement on this project. Additions and extensions to existing office buildings in Canberra included timber-framed buildings for the Parks and Gardens Section, Department of the Interior, at Acton, offices for the Department of Works and Housing staff at Acton, and the construction of additional office space at No. 2 Secretariat. Extensive additions to Parliament House, consequent upon the increase in numbers of members, were planned during this period. Other buildings erected included a Mothercraft and Baby Welfare Centre and pre-school play centres.

In the Causeway-Kingston industrial area, a Government-controlled hardwood sawmill, with an annual output of 1,300,000 super. feet of sawn timber, was erected. Plans were in hand for the duplication of this mill, with a resulting increased output double the present one. Preliminary plans were prepared for proposed development in workshop and industrial areas, with work planned to commence in 1948-49.

At Acton, construction was begun on temporary accommodation for the Australian National University, with plans well in hand for the permanent buildings which are to be sited in the immediate vicinity.

The major engineering and electrical works undertaken comprised the provision of essential services to houses and buildings being erected in new areas in various suburbs; extensions to high and low tension electricity supply mains; construction of roads and footpaths; replacement of two timber bridges by concrete structures; improvements to existing sports fields and the construction of new grounds; the provision of services such as water supply, sewerage and stormwater drainage; runway construction and obstruction lighting improvements at Fairbairn Aerodrome; and the extension of electricity supply lines to rural areas. To ensure an adequate water supply to the growing township of Queanbeyan, the 6in. supply pipe line from Canberra was replaced with a 9in. diameter line.

New roads, opening up the forestry area adjoining the City, were completed. These roads will ensure a constant supply of timber to the hardwood sawmill.

Mechanical engineering services included the installation of modern kitchen equipment in the various hostels erected during the two years, and the construction of timber-drying kilns, etc., at the Government-operated sawmill.

5. Forestry.—A considerable amount of reafforestation work has been undertaken and plantations have been established at Uriarra, Mount Stromlo, Pierce's Creek, Green Hills and Kowen. Experimental plots have also been established in the Brindabella mountains.

The total area of plantations to 30th June, 1948, was 15,000 acres. Forestry operations were begun on Mount Stromlo in 1915, and up to 1925 approximately 700 acres had been planted with pine and other trees. The plantings up to this time were chiefly on aesthetic lines, but since the initiation of a wider programme, arrangements have been made for pruning and thinning, and sawmill timber is now being obtained from the logs resulting from thinning operations. The yearly output of sawmill logs from thinnings is gradually improving and has increased from 30,000 super. feet in 1930-31 to 10,000,000 super. feet in 1947-48.

In 1926 a comprehensive review was undertaken of the Territory's potentialities in regard to forest development. A system of forestry management was instituted in the existing forest areas, and a considerable amount of survey and assessment work has been completed. *Pinus radiata* has been most extensively planted, and also, as a result of experimental work, pinus areas of better quality pines on a longer rotation, such as *Pinus ponderosa* and *laricio*, have been planted during recent years, but *Pinus radiata* remains the principal species.

6. Lands.—(i) *General*. Reference has been made in previous issues of the Official Year Book to the general conditions of land tenure in the Australian Capital Territory and to the area of alienated and leased land.

As considerable portions of the Territory lands are not required in connexion with the establishment of the city, large areas have been leased under special improvement conditions in regard to the extermination of noxious weeds and the destruction of rabbits and other pests. The lands are classified into three grades of agricultural and three grades of grazing land. Leases may be granted for grazing, fruitgrowing, horticulture, agriculture, residential, business, or other purposes for a period not exceeding 25 years. The annual rental is 4 per cent. of the assessed value of the land, including improvements which are the property of the Crown, plus the amount of rates payable. No person may hold under lease land of a greater value than £10,000, exclusive of the value of buildings and fences thereon. About 293,306 acres comprising 471 leases and 12 grazing licences were held under lease and licence at 30th June, 1948, for periods varying from quarterly tenure to 25 years.

Under the Seat of Government (Administration) Act 1910, Crown lands in the Territory may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of that Act. Leases of land in the City Area are granted under the City Area Leases Ordinance 1936-1947, and leases of other lands under the Leases Ordinance 1918-1937. Land is also leased for various purposes in the City Area under the Church Lands Leases Ordinance 1924-1932, and the Leases (Special Purposes) Ordinance 1925-1943.

(ii) *City Leases*. The Government may grant leases in the city area of any Crown land for business or residential purposes. Such leases may be issued for a period not exceeding 99 years at a rental equal to 5 per cent. of the unimproved value of the land, which value is subject to re-appraisal at the expiration of 20 years, and thereafter every 20 years. A suitable building must be commenced within 6 months and completed within 12 months unless an extension of time is allowed.

Auction sales of city leaseholds are described in Official Year Book No. 22, p. 599.

Six leases under the Church Lands Leases Ordinance 1924-1932, which require the lessees to submit a definite building programme within a specified period, and one lease under the Church of England Lands Ordinance 1926 have been granted for church purposes. A further eight leases under the Leases (Special Purposes) Ordinance 1925-1943, one lease under the City Area Leases Ordinance 1936-1947, and two leases under the Leases Ordinance 1918-1937 have been granted for church and scholastic purposes.

The total number of leases granted under the City Area Leases Ordinance, excluding surrendered leases, at the end of the financial year 1947-48 was 791 representing a capital value of £295,072. During the year 80 new leases were granted. The number of business and residential blocks surrendered to or determined by the Commonwealth to the end of the year was 354.

Under the terms of the City Area Leases Ordinance 1936-1947 each block is leased for a period of 99 years at a rental of £5 per cent. per annum of the unimproved capital value as assessed by the Commonwealth or bid at auction. At present such rentals are subject to a 20 per cent. rebate.

(iii) *In the Jervis Bay Territory.* The Commonwealth acquired from the State of New South Wales sovereign rights over the area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Australian Capital. The Royal Australian Naval College was established in this area on a site known as Captain's Point, but was removed in 1930 to Flinders Naval Base, Victoria. Leases have been granted over an area of 11,788 acres in the Jervis Bay Territory.

7. *Railways, etc.*—Canberra is connected with the railway system of New South Wales at Queanbeyan by a line $4\frac{1}{4}$ miles long. This line was opened for goods traffic on 25th May, 1914, and for passenger traffic on 15th October, 1923. The railway terminus is situated in the area known as Kingston.

A direct passenger service is in operation connecting Canberra with Sydney and Melbourne, and trains leave both cities for Canberra daily.

There are two companies operating air services each several times daily on the Melbourne—Canberra—Sydney route.

Regular motor-coach services link Canberra with New South Wales, Victoria and South Australia.

8. *Population.*—The census return of population on 30th June, 1938, was 11,290 in the Australian Capital Territory and 272 in the Jervis Bay Territory, or a total of 11,562 persons. The population at the Census of 30th June, 1947, was 16,905 persons—15,156 in the city area, 1,389 in the rural districts and 360 in the Jervis Bay area. The estimated population at 30th June, 1949, was 19,333.

9. *Production.*—During 1947-48 the production of the more important items of the agricultural and pastoral industry was—Wheat, 99,945 bushels; wool, 1,767,000 lb.; butter, 5 tons; meat (bone-in weight, fresh), 1,506 tons. The numbers of live stock depastured at 31st March, 1948, were—Horses, 973; cattle, 8,748; sheep, 215,227; and pigs, 566.

10. *Educational Facilities.*—Arrangements exist with the New South Wales Education Department for the administration of education up to and including the secondary stage in the Territory, the expenditure involved being refunded annually to the State. There are seven schools in the Australian Capital Territory and two in the Jervis Bay Territory. The largest school is situated at Telopea Park, Barton, with accommodation for 800 scholars. Secondary education is provided at the Canberra High School, Acton, and the Telopea Park Central School has a secondary department. The High School has accommodation for 550 scholars, and its curriculum provides a standard of education comparable in range of subjects with that provided at the Government High Schools in New South Wales. The School also provides for commercial and junior technical classes, and there is an Evening Youth College attached, with commercial, matriculation and other classes.

The Canberra Technical College at Kingston is provided with modern equipment for supplementary courses for apprentices, journeymen desirous of improving their trade qualifications, and for others who desire to take any special courses. Provision is also made for the training of ex-service personnel under the Commonwealth Reconstruction Scheme.

The Canberra Nursery School, Acton, established in 1944, provides for the training of children between the ages of 3 and 5 years.

Pre-school centres at Reid, Duntroon and Griffith-Forrest provide modified nursery school facilities for children between the ages of 3 and 5 years from those suburbs. Additional centres of this type are to be established in other areas.

There are at present four private schools in the Territory. The Canberra Grammar School, the Canberra Church of England Girls' Grammar School, and St. Christopher's Convent School provide for sub-primary, primary and secondary education, and St. Patrick's School provides sub-primary and primary education.

Reference to the establishment of the Canberra University College will be found in Chapter VI. "Education".

An area of approximately 250 acres has been set aside at Acton—at the foot of Black Mountain—within easy distance of the City, for an Australian National University. Provision is made for the establishment of such research schools as may be deemed desirable, including a School of Medical Research, and Research Schools of Physical Sciences, Social Sciences and Pacific Studies. Further reference to this University appears in § 6 pages 244-5 of Chapter VI. "Education".

11. **Finance.**—(i) *Financial Year 1947-48.* Receipts and expenditure for the financial year 1947-48 are given in the following table:—

AUSTRALIAN CAPITAL TERRITORY : RECEIPTS AND EXPENDITURE, 1947-48.
(£.)

Receipts.		Expenditure.				
Items.	Amount.	Items.	Works, etc.	Repairs and Maintenance.	Other.	Total.
Rent and rates ..	257,946	Architectural services ..	749,299	50,209	..	799,508
Electricity ..	112,668	Engineering services ..	183,389	166,347	..	349,736
Water Charges ..	15,399	Forestry ..	22,794	..	24,079	46,873
Motor Registration ..	16,615	Parks and Gardens ..	..	84,201	..	84,201
Interest ..	7,142	Housing loans ..	-8,644	..	..	-8,644
Miscellaneous ..	62,632	Sundry Works and Services	18,853	..	..	18,853
		Buildings and Engineering				
		Services for Health De-				
		partment ..	13,151	558	..	13,709
Total ..	472,402	Plant and Equipment—				
		Interior Services ..	11,158	..	..	11,158
		Works ..	22,979	..	..	22,979
Trust Funds—		Transport ..	63,050	..	..	63,050
Hotels ..	119,530	Education ..	..	..	99,138	99,138
Transport ..	312,640	Hospital ..	..	..	38,750	41,068
Canberra Officers' Homes, Melbourne		Administrative ..	..	2,318	175,776	175,776
Works and Housing	5,332	Interest and Sinking Fund ..	..	..	282,021	282,021
Suspense Account	68,020	Other Services ..	..	..	121,784	121,784
Interior Services						
Trust Account ..	105,136	Total ..	1,076,029	303,633	741,548	2,121,210
Allied Works—Plant and Materials Account ..	317,863	Trust Funds—				
Cemetery ..	2,368	Hotels ..	..	..	115,458	115,458
Housing ..	40,465	Transport ..	..	..	323,132	323,132
		Canberra Officers' Homes, Melbourne	..	..	63	63
		Works and Housing Sus-	..	..	74,809	74,809
		pense Account ..	..	..	82,571	82,571
Total ..	971,354	Interior Services Trust	..	..	413,741	413,741
		Account ..	..	..	1,765	1,765
		Allied Works—Plant and	..	..	43,451	43,451
		Materials Account ..	..	..	..	..
		Cemetery ..	..	..	..	..
		Housing ..	..	..	..	..
		Total ..	..	..	1,054,990	1,054,990
Aggregate Receipts ..	1,443,750	Aggregate Expenditure ..	1,076,029	303,633	1,790,538	3,176,200

The aggregate receipts for 1946-47 were £1,303,248 and expenditure was £2,774,444. Details will be found on p. 41 of *Finance Bulletin* No. 38, 1946-47.

(ii) *From 1901-2 to 30th June, 1948.*—The total receipts and expenditure from 1901-2 to 30th June, 1948, were as follows:—

AUSTRALIAN CAPITAL TERRITORY : RECEIPTS AND EXPENDITURE TO 30th JUNE, 1948.

Receipts.		£	Expenditure.		£
Commonwealth Treasury—			Lands ..	..	917,324
Parliamentary Appropriations—			Engineering works ..	..	5,974,925
Revenue ..	..	11,471,575	Architectural works ..	..	5,512,054
Loan ..	..	5,755,004	Other capital expenditure, sundry	..	..
			debtors, etc. ..	..	1,625,912
					14,030,215
			Seat of Government Establishment		
			Account, being maintenance and		
			administration less revenue; ex-		
			penditure of a capital nature for		
			which assets no longer exist;		
			profit and loss accounts of trading		
			activities, etc. ..	..	(a) 3,196,364
Total Receipts ..	..	17,226,579	Net Expenditure ..	..	17,226,579

(a) Excludes interest £4,965,625 net.

The foregoing table was prepared by the Department of the Interior and excludes part cost of national buildings (Parliament House, the secretariats, etc.), federal highways within the Territory, the Queanbeyan-Canberra Railway, the housing loan etc., and loans for housing—£2,175,537.

NORFOLK ISLAND.

1. **Area, Location, etc.**—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29° 3' 45" South, longitude 167° 56' 29" East. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from Auckland, 630 miles. The length of the coast line is 20 miles, and its form that of an irregular ellipse. Except for a portion on the south side, inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 49° and 85° F. with a mean of 68° F. The average annual rainfall is 52 inches. It has been said that the salubrious climate, coupled with the beauty of its landscapes and seascapes, should render Norfolk Island "the Madeira of the Pacific". Before the war the island was visited annually by a number of tourists. With the inauguration of direct air services from Australia and New Zealand, this traffic is again rapidly increasing.

2. **Settlement.**—The first colonization, in 1788, was by Lieutenant King, who in H.M.S. *Supply* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855 it was again made a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers, having become too numerous to subsist on Pitcairn Island, were removed thence to Norfolk Island in 1856. The new community numbering 94 males and 100 females were the descendants of British sailors and Tahitian women. The last of those transferred died at Norfolk Island on 1st March, 1943.

3. **Administration.**—In 1856 the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony, and finally by the passage of the Norfolk Island Act 1913 it was accepted by the Federal Parliament as a territory of Australia. From July, 1914 until 1st January, 1929, Norfolk Island was administered by the Department of Home and Territories, and then, until 25th June, 1941, by the Territories Branch of the Prime Minister's Department, but is now administered by the Department of External Territories through an Administrator. An amending measure, the Norfolk Island Act 1935, provided for the establishment of an Advisory Council of eight elected members to advise the Administrator.

4. **Population.**—The population as disclosed by the Census of 30th June, 1947, was 938, consisting of 505 males and 433 females. During 1947-48, 17 births, 12 deaths, and 6 marriages were recorded. The average age of the persons who died was 68 years. Arrivals to the island exceeded departures by 4, the respective figures being arrivals 607, departures, 603. The population at 30th June, 1948, was 947 (497 males and 450 females).

5. **Live Stock.**—The latest returns of live-stock show that at 30th September, 1946, there were on the island 1,464 cattle, 527 horses, 327 sheep and 25 pigs. In addition there were 5,369 head of poultry.

6. **Production, Trade, etc.**—The soil throughout is good and is specially suitable for the cultivation of bananas, citrus and other fruits. The Hawkesbury Wonder bean seed is one of the staple crops of the island. Since the promulgation of the Ordinance regulating the export of seed the area planted with bean seed has increased. Of the 1947-48 crop, 2,242 bushels were exported, the average price realized being approximately £3 per bushel.

Apart from the bean, agriculture generally has been depressed. A modern pulping factory was erected on the island during 1938, but whilst 82 tons of passion fruit pulp were produced during 1939-40, the quantity of pulp produced during 1947-48 amounted only to about 5½ tons. The pulping of cherry guavas for jelly has also been experimented with and investigations carried out with a view to cultivating flax and ramie.

The citrus trees in full bearing on the island are capable of producing over 3,000 cases of fruit, but owing to a lack of marketing facilities, production has been retarded. Lemon and orange juice, have, however, sold readily, the combined value of these two items of export during 1946-47 amounting to £460. There were no exports during 1947-48 as barrels were not available. Lemon seed exported during the year 1947-48 was valued at £206.

Large numbers of whales pass the island throughout the season. However, whaling had not been conducted for a number of years until 1948, when the industry was revived by the formation of a whaling company. The preserved fish industry which was established some years ago has met with a number of setbacks but several consignments of frozen fish valued at £220 were exported to Australia during 1947-48.

On 30th June, 1948, the total area of land held under freehold and Crown leasehold amounted to 6,330 acres, consisting of 4,140 acres freehold and 2,190 leasehold.

Imports and exports for the six years 1938-39 and 1943-44 to 1947-48 are shown hereunder; the values are expressed in Australian currency:—

NORFOLK ISLAND : IMPORTS AND EXPORTS.

(£.)

Country.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
IMPORTS.						
From—						
Australia	27,427	23,412	28,128	29,938	50,195	69,902
New Zealand .. ..	..	..	133	2,273	22,368	5,303
Pacific Islands ..	163	62	..	191	1,476	375
Total	27,590	23,474	28,261	32,402	74,039	75,580
EXPORTS.						
To—						
Australia	16,110	4,006	6,133	8,886	12,695	14,370
New Zealand	623	..	6	..	361	2,816
Pacific Islands ..	237	41	438	138	461	407
Total	16,970	4,047	6,577	9,024	13,517	17,593

Duties of Customs are levied on the following goods imported into Norfolk Island for home consumption :—

IMPORT DUTIES SCHEDULE.

Article.	Unit.	Rate of Duty.	Article.	Unit.	Rate of Duty.
		<i>s. d.</i>			<i>s. d.</i>
Spirits	pr. gal.	30 0	Chicory	lb.	0 3
Ale, beer, porter and cider	gal.	2 6	Petroleum, etc. ..	gal.	0 3
Wine, still—			Kerosene, etc. ..	"	0 3
Australian ..	"	5 0	Residual oil, etc. ..	"	0 3
Other	"	10 0	Oil, n.e.i.	"	0 3
Wine, sparkling—			Lubricating oils ..	"	0 3
Australian ..	"	15 0	Sugar	cwt.	3 0
Other	"	25 0	Molasses, etc. ..	"	2 0
Tobacco, manufactured			Biscuits	lb.	0 1
or unmanufactured—			Candles	"	0 1
Australian leaf ..	lb.	2 0	Confectionery ..	"	0 3
Other leaf	"	4 0	Dried fruits—		
Cigars and cigarettes ..	"	6 0	Australian	"	0 1
Tea	"	0 3	Other	"	0 3
Coffee	"	0 3	Jams, jellies and pre- serves	"	0 1

No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are (a) the produce or manufacture of Norfolk Island; (b) shipped direct to Australia; and (c) not goods which if manufactured or produced in Australia would be subject to excise duty.

7. **Communication.**—The “all-red” cable from Great Britain via Vancouver, Fanning Island and Fiji bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane.

A shipping service to the Territory is maintained at approximately three-monthly intervals by vessels of Burns Philp & Co. Ltd., Sydney. The journey from Sydney to Norfolk Island occupies about four days.

The construction of an aerodrome on the island was completed during 1943. A fortnightly passenger and air freight service between Sydney and Norfolk Island is maintained by Qantas Empire Airways Ltd., and regular air services are also in operation from New Zealand and Fiji.

Until 10th June, 1947, the post office at Norfolk Island was part of the Commonwealth postal system, but as from that date Norfolk Island was established as a separate postal administration with its own issue of stamps.

8. **Social Condition.**—Education is free and compulsory up to the age of fifteen years. The school conforms to the Australian standard of public education, ranging from kindergarten to the intermediate certificate, with a two years' super-primary course of instruction in cultural subjects and in woodwork, needlework, leatherwork, basketry and hat-making. The headmaster and assistant teachers are lent by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled on 30th June, 1948 was 128.

The Court of Norfolk Island presided over by a Chief Magistrate is a court of record with dual jurisdiction. Sitting in its Limited Jurisdiction the Court has power to hear and determine actions of claims not exceeding £30 and to punish summarily all crimes and offences involving a pecuniary penalty or a sentence of imprisonment not exceeding six months. In its Full Jurisdiction the Court can hear and determine all actions, punish all crimes and offences, grant probate and letters of administration, hear and determine appeals from any conviction of the Court sitting in its Limited Jurisdiction, and has authority in all other matters. An appeal lies to the High Court of Australia from any judgment, order, decree or sentence of the Court sitting in its Full Jurisdiction.

9. **Finances.**—The whole of the Territorial revenue together with an annual grant from the Commonwealth Government in aid of the administrative expenses is paid to the credit of the Norfolk Island Trust Fund Account, and all administrative and developmental expenses are paid from that account. The operations for 1947-48 were as follows :—

NORFOLK ISLAND TRUST FUND ACCOUNT, 1947-48.

(£.)

Items.	Receipts.	Items.	Expenditure.
Balance brought forward ..	24,301	Salaries	9,601
Commonwealth grant ..	4,000	Purchase of liquor ..	9,572
Commonwealth grant for land resumptions	503	Repairs and maintenance, etc.	2,556
Customs duties	6,639	Aerodrome compensation ..	939
Sale of liquor	10,616	Post Office	30,496
Post Office	68,607	Miscellaneous	13,260
Miscellaneous	5,975	Balance	54,217
Total	120,641	Total	120,641

PAPUA AND NEW GUINEA.

Administration .. ..	364

Following the outbreak of the Pacific War civil administration in Papua and New Guinea was suspended on 11th February, 1942, and military control commenced. The Territory of New Guinea came under Japanese occupation in 1942, but the greater part had already been recaptured by Australian and Allied Forces when the Japanese surrendered in August, 1945. During the period of military control matters relating to the former civil administration were dealt with by the Department of External Territories, Canberra. The Minister for External Territories was empowered by National Security Regulations to exercise the powers and functions of the Administrator, officers, and authorities of the territories, and jurisdiction of the Supreme Courts of Papua and New Guinea was vested in the Supreme Court of the Australian Capital Territory.

Pursuant to the provisions of the Papua-New Guinea Provisional Administration Act 1945, a single Provisional Administration Service was formed to take over from the military authorities in the Territories of Papua and New Guinea. Colonel J. K. Murray was appointed Administrator of the combined Territories on 11th October, 1945, and the transfer from military to civil control in Papua and the portion of the Territory of New Guinea south of the Markham River was effected on 30th October, 1945. Jurisdiction of the Supreme Courts of Papua and New Guinea was then vested in the Supreme Court of the Territory of Papua-New Guinea. As circumstances permitted, civil control was extended to other areas until the whole of the Territory of New Guinea came under control of the Provisional Administration of Papua-New Guinea on 24th June, 1946.

The Papua-New Guinea Provisional Administration Act 1945-1946 was repealed by the Papua and New Guinea Act 1949 which came into force on 1st July, 1949. The latter Act approved the placing of the Territory of New Guinea under the International Trusteeship system and provides for an Administrative Union, one Administrator, one Supreme Court and one Public Service.

Provision is made for an Executive Council of not less than nine officers of the Territory, who shall be appointed by the Governor-General, and a Legislative Council consisting of twenty-nine members, namely :—(a) the Administrator ; (b) sixteen officers of the Territory (who shall be known as official members) ; (c) three non-official members possessing such qualifications as are provided by Ordinance and elected, as provided by Ordinance, by electors of the Territory ; (d) three non-official members representing the interests of the Christian missions in the Territory ; (e) three non-official native members ; and (f) three other non-official members.

The Legislative Council shall commence to perform its powers and functions under the Act as soon as practicable after 1st July, 1950. The date will be fixed by Proclamation.

Subject to the Act, provision may be made by Ordinance for the establishment of Advisory Councils for Native Matters and Native Village Councils.

The Act also makes provision for the continuance of the existing laws of the Territory of Papua and the Territory of New Guinea.

PAPUA.

§ 1. General Description.

1. **Early Administration.**—Particulars of the early administration of Papua are given in Official Year Book No. 19, p. 576.

2. **Administration by Commonwealth of Australia.**—The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of 18th March, 1902, and was accepted by the Commonwealth by the Papua Act 1905, which came into force by virtue of the aforesaid proclamation. The transfer was made under the authority of Section 122 of the Constitution. The Territory is now under the control of the Commonwealth, but not included within it, and is divided into nine magisterial divisions, viz. :—Central Highlands, Western, Delta, Gulf, Central, East Central, Eastern, Northern and South-Eastern.

3. **Area, etc.**—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Sudest and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 920 miles; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerably narrower. The Territory comprises also the islands of the Trobriand, Woodlark, D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is about 90,540 square miles, of which 87,786 are on the mainland, and 2,754 on the islands. A reference to the physical characteristics of the Territory appears in previous issues of the Official Year Book (*see* No. 18, p. 633).

§ 2. Population.

1. **Non-indigenous Population.**—(i) *General.* The number of the non-indigenous population enumerated at the Census of 30th June, 1947, was 3,239 of whom 2,057 were males and 1,182 females. There were 2,736 full-bloods, of whom 2,542 were Europeans and 194 non-Europeans; half-castes with one of the parents a European numbered 503.

The table following shows the non-indigenous population enumerated at the last three censuses and as estimated at 30th June, 1948 :—

PAPUA : NON-INDIGENOUS POPULATION.

Race.				4th April, 1921.	30th June, 1933.	30th June, 1947.	30th June, 1948.
Full-blood—							
European	..	..	..	1,343	1,148	2,542	2,641
Non-European—							
Filipino	..	..	..	91	88	21	} (b)
Malay	..	..	..	63	158	24	
Polynesian	..	..	..	372	488	96	
Other ..	..	..	..	51	52	53	
Total	..	..	..	577	786	194	
Half-caste (a)	..	..	..	158	227	503	
Not Stated	..	..	..	..	12	..	
Grand Total..	..	..	..	2,078	2,173	3,239	

(a) Persons who have European blood to the extent of one-half.

(b) Not available.

An Immigration Restriction Ordinance prohibits the immigration of persons who fail to pass the dictation test, or who are of bad character, or likely to become a charge upon the public. Exemptions may, however, be granted by the Administrator to persons of special skill required for employment as overseers or foremen.

(ii) *European Population.* The European population of Papua at the Census of 30th June, 1947, was 2,542, made up of 1,700 males and 842 females. The numbers recorded in earlier years were:—1937, 1,323; 1938, 1,488; 1939, 1,608; 1940, 1,822; and 1941, 3,070. At 30th June, 1948, the European population was estimated at 2,641.

(iii) *Non-European Population.* The non-European section of the non-indigenous population at 30th June, 1947 was 697 of whom 194 were full-bloods and 503 were half-castes with one of the parents a European.

2. *Native Population.* It is not possible to give exact data regarding the number of natives, because a large area of the interior has not as yet been under complete Government control. The official estimate is 300,000. Such censuses of the native population as have been taken during recent years point to a slight increase.

§ 3. Native Labour, Taxation, Health, etc.

1. *Native Labour.*—The existing laws relating to native labour are uniform in Papua and New Guinea, and are contained in the Native Labour Ordinance 1946 of the Territory of Papua-New Guinea and in the regulations made thereunder. Employers may recruit personally or by associations of employers or by salaried persons in the regular employment of those employers or associations. The administration determines the numbers that may leave a village for employment. Service on the part of the native is voluntary and he must be justly treated, properly housed and fed and given adequate medical attention when necessary. Natives under 16 years may not be employed and a minimum monthly wage (15s.) and working week (44 hours) are prescribed. Employment under contract is limited to a maximum of 12 months and re-engagement is not permitted until the native has been returned to his village for a period of three months. Employers must repatriate native labourers on termination of their contracts. Provision also exists for compensation for injury or death arising out of employment.

The number of natives engaged under contract of service on 30th June, 1949 was 4,916. In addition, it is estimated that there were 8,355 non-indentured employees.

2. *Native Taxes.*—Under the Native Taxes Ordinance 1917–1936, a tax not exceeding £1 per annum may be imposed on natives, except native constables, mission teachers and mission students, natives unfit for work, and those who have four living children. The proceeds of the tax must be expended on native education, or devoted to purposes directly benefiting the natives, but no taxes have been collected since 1941.

3. *Health.*—At 30th June, 1948, there were three European hospitals (one privately controlled), twenty-one native hospitals (one private and four mission), sixty-nine aid-posts (fifty-one mission), thirty welfare clinics (twenty-nine mission) and two leprosaria functioning in the Territory. Hospitals are also conducted by the various plantation companies. The mission societies employ a number of doctors and trained nurses. European medical assistants are employed by the Government. A training school has been established for the purpose of training natives in first-aid, elementary physics, chemistry, anatomy, physiology and pathology in preparation for their employment as native medical assistants. Native students also attend the Native Medical Practitioners' School at Fiji. The chief complaints treated are malaria, yaws, ulcers, lung affections, hookworm, venereal and skin diseases.

§ 4. Land Tenure.

1. *Method of Obtaining Land.*—The broad principles upon which the land laws of Papua are based are (a) no land can be alienated in fee simple; (b) the rental of the land leased is assessed on the unimproved value of the land, and is subject to re-appraisal at fixed periods. The terms upon which land may be leased are very liberal. Leaseholds of the best class of agricultural land may be obtained for 99 years. No rent is payable during the first ten years of the lease on areas less than 1,000 acres. During the following ten years the rent is charged at the rate of 5 per cent. on the unimproved value of the land. The unimproved value of the land is appraised every

twenty years and the rent determined accordingly. If on any appraisalment the rent is raised by more than one-third the lessee may disclaim the lease and shall be entitled to receive compensation for his improvements. The unimproved value of agricultural land has been fixed at 5s. per acre. Rent is immediately payable on areas exceeding 1,000 acres, and survey fees on areas exceeding 100 acres.

2. **Crown Lands.**—Private sales of native-owned land in the Territory have now ceased. The Government buys from the natives, and then leases to planters, who are forbidden to have direct dealings in land with Papuans. The total area of Papua is a little less than 58,000,000 acres, and of this, 1,791,117 acres have been alienated. Of the latter area, 282,814 acres are held under leasehold tenure, and 24,285 acres in fee simple (freehold) by non-native inhabitants, the Administration holding the balance (approximately 1,483,648 acres), which includes land that has been declared waste and vacant. These figures are approximate only, owing to the loss during the war of some survey records which it has not been possible to reconstruct.

§ 5. Production.

1. **General.**—The products of the Territory are obtained from its agricultural, timber, fishing, mining and manufacturing industries. Gold is the principal mineral mined, and rubber and copra are the most important amongst plantation products. Portions of the Territory appear well suited for cotton cultivation, and there is a possibility of obtaining petroleum in marketable quantities.

2. **Agriculture.**—(i) *Soil and Rainfall.* Rich soils at varying elevations and heavy and evenly distributed rainfall favour the cultivation of a variety of tropical products including sugar-cane, coco-nuts, sago palm, bread fruit, dyewoods, spices, ginger, nutmegs, bananas and other fruits. There are large areas of rich alluvial and volcanic soils along the coast, and fertile land is found at elevations up to 6,000 feet. Heavy rainfalls occur, except over a belt of country which runs back from the coast at Port Moresby to the hills and which has its dry season from May to November. This "dry" area is admirably suited for the production of tobacco, fibres, cotton, etc.

(ii) *Plantations.* Agricultural settlement has been mostly in the Central and Eastern Divisions, with coco-nuts and rubber as the principal crops. The Native Plantations Ordinance provides for the establishment of plantations in which half of the proceeds is paid to the natives entitled thereto, and the remaining half paid into the Native Education Fund. The basis of a contract to stabilize the copra industry of Papua and New Guinea on a long term agreement with the United Kingdom has been reached. The contract will be for a period of nine years and the price for 1949 £stg. 48 per ton f.o.b. Territory ports. The price for each subsequent year will not be more than 10 per cent. higher or lower than the preceding year and will be negotiated before the end of the preceding year.

(iii) *Government Plantations.* There are five Government plantations, the Orangerie Bay and Kikori coco-nut plantations and the Gebaregere, Cupola and Kokoda rubber plantations.

3. **Forestry.**—The principal softwood timber is known as "ilimo," while among satisfactory timbers of the lowlands are "nara," "medobi," and "melila." There are large numbers of woods, varying from the softest to the hardest, including beautiful cabinet woods, but research is necessary to determine their usefulness. The development of a coniferous belt at the higher altitudes offers great possibilities. It is believed that teak and sandalwood are well suited for cultivation.

4. **Live Stock.**—At 31st December, 1940, the live stock in the Territory consisted of 587 horses, 5,994 head of cattle, 87 mules, 1,244 goats, 665 pigs, 30 sheep and 6,320 fowls. The introduction of rabbits, foxes, hares and monkeys is prohibited. Post-war live-stock statistics are not available, but at 30th June, 1948, it was estimated that there were 312 horses, 2,100 head of cattle, 45 mules, 1,200 goats, 560 pigs and 4,500 fowls in the Territory. These figures exclude native-owned live stock.

5. **Fisheries.**—Pearl-shell fishing is one of the industries of Papua. The species of tortoise which supplies the commercial tortoise-shell is also a native of Papua. Bêche-de-mer and trochus are found along the shores and reefs and form valuable articles of export.

6. **Mining.**—(i) *Variety of Minerals.* Minerals have been found over a wide range of country. Those discovered so far are gold, copper, tin, lead, zinc, cinnabar, iron, osmiridium, gypsum, manganese, sulphur, graphite, chromite, lignite, platinum and petroleum.

The existence of petroleum has been traced at scattered intervals over a large area. Three companies hold permits under the provisions of the Petroleum (Prospecting and Mining) Ordinance 1938-1939 and oil prospecting has been carried on in the Western, Delta, Gulf and Central Divisions.

Of precious stones, only the topaz and beryl have been obtained. Large beds of apparently good coal also exist.

(ii) *Gold.* Gold was discovered in 1888 and the search gradually spread over every division, finds being reported wherever the explorers went. The estimated quantity in fine ounces and the value of the gold yield for the years 1938-39 to 1940-41, 1946-47 and 1947-48 are given below :

PAPUA : GOLD YIELD.(a)

1938-39.		1939-40.		1940-41.(b)		1946-47.		1947-48.	
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Fine oz.	£	Fine oz.	£	Fine oz.	£	Fine oz.	£	Fine oz.	£
35,808	325,116	30,422	316,203	10,348	110,501	446	4,077	283	2,299

(a) Valued at average price realized for fine gold in Australia, 1941.

(b) Nine months ended March,

The total value of gold won to 31st December, 1948 was £3,275,626.

(iii) *Other Minerals.* Some good samples of galena (sulphide of lead) have been obtained, while cinnabar (sulphide of mercury), graphite (or plumbago), zinc-blende, native sulphur, and other minerals are known to exist. In 1924 a deposit of lignite was discovered on Smoky Creek, a tributary of the Era River. Copper matte to the value of £5,999 was exported during 1940-41. The principal value of this item is its gold content.

7. **Water Power.**—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there is at least 10,000,000 h.p. available for this purpose.

§ 6. Trade and Shipping.

1. **Customs Tariff.**—In the Schedule to the Customs Tariff of Papua 136 items are mentioned, of which approximately one-third is on the free list and consists of a number of foodstuffs and certain manufactures for use in the development of the Territory or its industries. Where duties are imposed they are generally on a 10 per cent. ad valorem basis, with the exception of ale, spirits, beverages and tobacco on which high revenue rates are imposed. Preference is given to Australian wines. On 16th July, 1931, a primage duty of 4 per cent. ad valorem was imposed on all goods, whether dutiable or not, in addition to the ordinary customs dues; the rate was subsequently reduced to 2½ per cent. and the duty ceased to operate on 1st July, 1937. From 12th July, 1940, the duty has been re-imposed, but certain specified articles have been exempted. The value of imports into Papua during 1947-48 was £2,393,497 and the duty collected, £145,189. In 1947-48, £30,412 was received in export duties.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) 1936 for the free entry into Australia of certain goods produced and imported

direct from Papua (see Chapter XII. "Trade"), and a proclamation of 25th September, 1935 exempted from primage duty goods produced or manufactured in the Territory.

2. Imports and Exports.—Tables of imports and exports during the years 1938–39 to 1940–41, 1946–47 and 1947–48 are given below. The values of exports are expressed in Australian currency but it is not possible to determine accurately the currency of the £ in the table of imports.

PAPUA : IMPORTS AND EXPORTS.

(£.)

Particulars.	1938–39.	1939–40.	1940–41.	1946–47.	1947–48.
IMPORTS.					
Ale, spirits and beverages ..	14,818	19,544	24,922	34,669	42,792
Tobacco and manufactures ..	27,466	31,669	31,874	63,457	73,645
Agricultural products and groceries	138,551	156,560	160,345	396,900	569,794
Textiles, felts, furs, attire, etc. ..	37,712	55,388	46,883	88,472	151,894
Metals and machinery ..	76,068	306,937	80,294	179,148	431,005
Oils, paints and varnishes ..	33,331	44,141	37,437	71,751	352,299
Earthenware, cement, glass, etc. ..	5,585	7,069	7,939	14,549	22,506
Drugs and chemicals ..	12,828	17,630	16,904	19,322	25,729
Wood, wicker and cane ..	13,076	8,400	9,039	18,003	17,769
Jewellery and fancy goods ..	7,756	8,075	7,443	55,640	36,525
Leather and rubber ..	8,076	11,154	8,996	12,704	20,022
Paper and stationery ..	8,521	8,218	8,237	15,600	25,691
Miscellaneous ..	94,273	79,128	53,516	497,554	623,826
Government stores ..	36,747	72,499	45,323		
Total ..	514,808	826,412	539,152	1,467,769	2,393,497
EXPORTS.					
Bêche-de-mer ..	2,506	1,024	1,202	..	..
Coco-nut, desiccated ..	48,140	58,015	59,523	..	..
Coffee beans ..	6,911	5,289	5,754	1,288	275
Copra ..	57,999	45,568	59,062	136,764	316,739
Gold ..	152,103	139,621	133,341	4,077	2,299
Pearls ..	15	..	6,000	..	2,000
Rubber ..	114,949	152,487	172,099	156,232	152,042
Trochus shell ..	9,200	9,312	1,680	9,527	8,783
Other ..	98,335	99,356	54,114	39,126	341,753
Total ..	490,158	510,672	492,775	347,014	823,891

Pre-war, the trade of the Territory reached its maximum in 1939–40, exceeding by £180,414 the previous highest figure which was established in 1925–26 when imports were valued at £470,774 and exports at £685,896. Prices for both copra and rubber were high about 1925–26 and the copper-mines were producing freely. Since the war, the increase in value of imports has been due to a greater volume of goods and an increase in the prices of practically all commodities. The increase in exports has been due mainly to copra, the exports of which exceeded those for the previous year by approximately 3,280 tons in quantity and £180,000 in value, and to surplus war stores exported by purchasers.

3. Direction of Trade.—Particulars of the countries of origin of the imports into Papua and of destination of the goods shipped therefrom are shown below for the years 1938–39, 1940–41 and 1947–48.

PAPUA : DIRECTION OF TRADE.

(£.)

Country.	Imports.			Exports.		
	1938-39.	1940-41.	1947-48.	1938-39.	1940-41.	1947-48.
Australia ..	239,105	298,848	1,620,864	409,408	453,504	680,968
United Kingdom ..	56,699	51,732	160,201	25,840	16,764	190
Other British Countries	45,313	49,454	2,275	17,630	8,453	120,663
Europe ..	23,966	5,414	..	11,024	..	204
Japan ..	14,858	24,821	..	7,582	7,718	..
Asia, excluding Japan	38,960	15,414	11,995	2,425	1,279	..
Netherlands Indies ..	21,288	29,278	29,033	11,519	4,744	19,935
U.S. of America ..	73,446	64,137	473,641	576	313	1,931
America, Other ..	1,173	54	95,488	..	..	..
Morocco ..	..	..	..	4,154	..	..
Total ..	514,808	539,152	2,393,497	490,158	492,775	823,891

4. Shipping.—The following table shows the number and tonnage of oversea vessels entered and cleared at ports during the years 1937-38 to 1940-41 and 1947-48 :—

PAPUA : OVERSEA SHIPPING.

Year.	Vessels.		Tonnage.	
1937-38	243	..	482,981
1938-39	215	..	461,199
1939-40	227	..	489,970
1940-41	217	..	489,469
1947-48	178	..	253,621

NOTE.—The figures above exclude ships of war and Government vessels.

§ 7. Finance.

The revenue and expenditure of Papua for the years 1937-38 to 1940-41 and 1947-48 were as follows :—

PAPUA : REVENUE AND EXPENDITURE.

(£.)

Particulars.	1937-38.	1938-39.	1939-40.	1940-41.	1947-48.
Revenue—					
Customs ..	58,539	54,606	64,874	77,359	221,661
Commonwealth Grant ..	42,500	42,500	42,500	42,500	757,449
Lands ..	6,709	6,013	7,112	7,700	11,117
Fees, fines, etc. ..	7,065	9,501	9,554	10,050	9,605
Other ..	67,995	53,203	53,878	51,909	81,797
Total ..	182,808	165,823	177,918	189,518	1,081,629
Expenditure—					
Medical ..	20,884	22,075	20,785	24,718	102,316
Ordinary Votes ..	122,536	116,275	127,455	132,633	366,408
Public Works ..	35,828	25,458	26,966	29,886	320,352
Native Affairs ..	3,854	2,522	2,726	1,763	241,047
Total ..	183,102	166,330	177,932	189,000	1,030,123

The table above and that on page 385 give separate particulars of the respective territories. Following the institution of the new provisional administration particulars of finance relate to both territories. In order to provide a comparison with 1947-48, combined particulars are also shown below for the years 1939-40, 1940-41, 1945-46 and 1946-47. The figures include the transactions of the following accounts :—Trust Territory of New Guinea—Consolidated Revenue Account : Papua—Public Revenue Account,

Native Tax Account, Native Education Fund and Native Benefits Fund. Figures for 1945-46 relate to Civil Administration only. The last three funds are not included in the table above.

TERRITORIES OF PAPUA AND NEW GUINEA : REVENUE AND EXPENDITURE.
(£.)

Particulars.	1939-40.	1940-41.	1945-46.	1946-47.	1947-48.
Revenue—					
Taxation—					
Customs Duties	259,688	225,749	48,775	303,995	530,170
Stamp Duties	6,581	4,590	261	11,039	6,048
Native Head Taxes	34,831	38,515	..	..	..
Licences	14,266	11,683	741	6,000	11,353
Other Taxes	5,971	4,664	..	..	..
Commonwealth Grants	(a) 69,500	(a) 81,000	252,740	2,018,673	1,866,942
Post Office	29,967	25,025	6,618	27,970	41,127
Land	22,393	24,057	97	5,364	16,894
Forestry	(b)	(b)	10	10,684	43,193
Agriculture	12,649	14,855	4	3,929	37,045
Mining—					
Royalty on Gold	c 143,906	c 119,792	..	9,451	35,581
Other	15,164	13,533	540	1,669	14,218
Harbour Dues, Wharfage, &c. ..	18,209	14,596	1,758	11,773	110,109
Fees, Fines and Forfeitures, n.e.i. ..	11,345	11,570	1,958	10,861	17,972
Electric Light and Power Supply, Papua	7,191	8,201	..	1,303	10,768
Other Revenue	35,347	30,546	4,660	59,968	39,412
Total	687,008	628,376	318,162	2,482,679	2,780,832
Expenditure—					
Public Debt Charges—					
Interest (c)	684	647	..	..	..
Provision for Redemption of Debt (c)	7,451	972	..	..	..
Post Office	(d) 17,723	(d) 15,883	10,986	46,687	78,867
Social Expenditure—					
Education	13,348	12,141	3,090	36,695	103,008
Public Health Services, Hospitals, etc.	107,199	106,267	32,905	174,794	303,699
Law, Order and Public Safety	93,330	87,475	23,562	112,672	164,440
Native Welfare, n.e.i.	10,422	9,694	(e)	(e)	(e)
Grants to Missions for Education and Medical Services	5,001	5,440	8,476	16,227	22,366
District Services and Native Affairs	130,022	107,870	87,063	435,723	583,068
Wages due to Natives under Pre-war Contracts .. ..	..	..	3,340	77,105	13,970
Compensation to Natives for war injuries and war damage .. ..	..	..	10,322	189,580	289,032
New Works, Buildings, etc.	(c) 63,257	(c) 48,509	21,672	87,219	242,974
Other Public Works and Services	49,692	43,510	37,976	260,800	414,478
Electric Light and Power, Papua	5,370	9,107	450	6,732	52,235
Legislative, General Administration and Other Expenditure	186,929	185,450	60,582	f 859,137	418,914
Total	690,434	632,965	300,424	2,303,371	2,687,051

(a) Includes payments, by Commonwealth to Trust Territory of New Guinea, of collections under Gold Tax Act 1939 on gold produced in New Guinea—1939-40, £27,000 and 1940-41, £38,500. (b) Not available separately. Included with Lands. (c) Trust Territory of New Guinea only. (d) Excludes salaries in Trust Territory of New Guinea. These are included under General Administration. (e) Now included under other headings. (f) Includes purchases from Commonwealth Disposals Commission, £659,541.

§ 8. Progress of Papua.

The following table indicates the progress made from 1st September, 1906, when the Territory was placed under Australian control, to 30th June, 1948 :—

PAPUA : STATISTICAL SUMMARY.

Items.		Year ended 30th June—			
		1907.	1939.	1941.	1948.
White population ..	No.	690	1,608	3,070	2,641
Native labourers employed ..	"	2,000	19,733	20,065	20,069
Territorial revenue ..	£	21,813	123,323	147,018	1,081,629
" expenditure ..	£	45,335	166,330	189,000	1,030,123
Value of imports ..	£	87,776	514,808	539,152	2,393,497
" exports ..	£	63,756	490,158	492,775	823,891
Area of plantations ..	acres	1,467	59,224	63,609	68,300
Meteorological stations established	No.	3	21	21	..
Gold yield ..	fine oz.	12,439	35,808	(a) 10,348	283

(a) Nine months ended March, 1941.

TRUST TERRITORY OF NEW GUINEA.

§ 1. General Description.

The land area of the Territory of New Guinea is about 93,000 square miles and the area including the sea within the lines drawn through its extreme outer points is more than 1,000,000 square miles. As the coast of the Territory has not been completely surveyed, the areas of the various islands are known only approximately.

The approximate areas of the principal islands together with the small islands adjacent thereto are as follows :—

AREA OF TERRITORY OF NEW GUINEA.

(Sq. Miles.)

Particulars.	Approximate Area.
North-East New Guinea (also called "The Mainland") ..	69,700
Bismarck Archipelago—	
New Britain	14,600
New Ireland	3,340
Lavongai	460
Admiralty Islands	800
Solomon Islands—	
Bougainville	3,880
Buka	220
Total	93,000

Information regarding physiography and climate will be found in Official Year Book No. 22, p. 613, and in the *Official Handbook of the Territory*.

§ 2. Government.

1. **The Military Occupation (1914-18 War).**—On 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government on 9th May, 1921.

2. **1939-45 War.**—For the events following the outbreak of the Pacific War and the formation of the Papua-New Guinea Provisional Administration in 1945, *see* p. 364 *ante*.

3. **Mandate (1920).**—In 1919 it was decided by the Principal Allied and Associated Powers that the Territory of New Guinea, which Germany gave up as one of the terms of peace, should be entrusted under Mandate from the League of Nations to the Government of the Commonwealth. The issuing of the Mandate was, however, delayed, and it was not until 17th December, 1920 that its terms were settled, and the Mandate itself did not reach Australia until April, 1921.

The terms of the Mandate are given in Official Year Book No. 33 (*see* p. 264).

4. **Trusteeship (1946).**—The Commonwealth Government undertook to place the Territory of New Guinea under the Trusteeship System established under the Charter of the United Nations. The Trusteeship Agreement for the Territory, under which the Government of Australia is the sole administering authority, was approved by the General Assembly of the United Nations Organization on 13th December, 1946. The terms of the Agreement are as follows :—

Preamble : The Territory of New Guinea has been administered in accordance with Article 22 of the Covenant of the League of Nations and in pursuance of a Mandate conferred upon His Britannic Majesty and exercised on his behalf by the Government of the Commonwealth of Australia.

The Charter of the United Nations, signed at San Francisco on 26th June, 1945, provides by Article 75 for the establishment of an international trusteeship system for the administration and supervision of such territories as may be placed thereunder by subsequent individual agreements.

The Government of Australia now undertakes to place the Territory of New Guinea under the trusteeship system, on the terms set forth in the present Trusteeship Agreement.

Therefore, the General Assembly of the United Nations, acting in pursuance of Article 85 of the Charter, approves the following terms of trusteeship for the Territory of New Guinea in substitution for the terms of the Mandate under which the Territory has been administered :—

Article 1. The Territory to which this trusteeship agreement applies (hereinafter called the Territory) consists of that portion of the island of New Guinea and the groups of islands administered therewith under the Mandate dated 17th December, 1920, conferred upon His Britannic Majesty and exercised by the Government of Australia.

Article 2. The Government of Australia (hereinafter called the Administering Authority) is hereby designated as the sole authority which will exercise the administration of the Territory.

Article 3. The Administering Authority undertakes to administer the Territory in accordance with the provisions of the Charter and in such a manner as to achieve in the Territory the basic objectives of the international trusteeship system, which are set forth in Article 76 of the Charter.

Article 4. The Administering Authority will be responsible for the peace, order, good government and defence of the Territory and for this purpose will have the same powers of legislation, administration and jurisdiction in and over the Territory as if it were an integral part of Australia, and will be entitled to apply to the Territory, subject to such modifications as its deems desirable, such laws of the Commonwealth of Australia as it deems appropriate to the needs and conditions of the Territory.

Article 5. It is agreed that the Administering Authority, in the exercise of its powers under Article 4, will be at liberty to bring the Territory into a customs, fiscal or administrative union or federation with other dependent territories under its jurisdiction or control, and to establish common services between the Territory and any or all of these territories, if (in its opinion) it would be in the interests of the Territory and not inconsistent with the basic objectives of the trusteeship system to do so.

Article 6. The Administering Authority further undertakes to apply in the Territory the provisions of such international agreements and such recommendations of the specialized agencies referred to in Article 57 of the Charter as are, in the opinion of the Administering Authority, suited to the needs and conditions of the Territory and conducive to the achievement of the basic objectives of the trusteeship system.

Article 7. The Administering Authority may take all measures in the Territory which it considers desirable to provide for the defence of the Territory and for the maintenance of international peace and security.

Article 8. The Administering Authority undertakes that in the discharge of its obligations under Article 3 of this agreement—

1. It will co-operate with the Trusteeship Council in the discharge of all the Council's functions under Articles 87 and 88 of the Charter.

2. It will, in accordance with its established policy—

- (a) take into consideration the customs and usages of the inhabitants of New Guinea and respect the rights and safeguard the interests both present and future of the indigenous inhabitants of the Territory and, in particular, ensure that no rights over native land in favour of any person not an indigenous inhabitant of New Guinea may be created or transferred except with the consent of the competent public authority;

- (b) promote, as may be appropriate to the circumstances of the Territory, the educational and cultural advancement of the inhabitants;

- (c) assure to the inhabitants of the Territory, as may be appropriate to the particular circumstances of the Territory and its peoples, a progressively increasing share in the administrative and other services of the Territory;

- (d) guarantee to the inhabitants of the Territory, subject only to the requirements of public order, freedom of speech, of the press, of assembly, of petition, freedom of conscience and worship and freedom of religious teaching.

5. *Administration.*—For particulars of the administration of the Territory of New Guinea prior to the setting-up of the Papua and New Guinea Administration see Official Year Book No. 36 and earlier issues.

For administrative purposes the Territory is divided into the following districts :—New Britain, comprising New Britain and adjacent islands; Morobe, Madang, Central Highlands, and Sepik on the mainland; New Ireland, comprising New Ireland, Lavongai and adjacent islands; Manus, comprising the Admiralty Group; and Kieta, the former German portion of the Solomon Islands. Each district is under a District Officer, assisted by a small staff.

§ 3. Population.

1. *Non-indigenous Population.*—(i) *General.* The number of the non-indigenous population enumerated at the Census of 30th June, 1947, was 6,200, of whom 4,369 were males and 1,831 were females. There were 5,627 full-bloods, of whom 3,412 were Europeans and 2,215 non-Europeans. Half-castes with one of the parents a European numbered 573.

At the 30th June, 1948 the non-indigenous population was estimated at 7,026.

The following table shows the non-indigenous population enumerated at the last three censuses and as estimated at 30th June, 1948:—

TERRITORY OF NEW GUINEA : NON-INDIGENOUS POPULATION.

Race.				4th April, 1921.	30th June, 1933.	30th June, 1947.	30th June, 1948.
Full-blood—							
European	..	..	..	1,288	3,191	3,412	(b)
Non-European—							
Chinese	..	..	..	1,424	1,449	1,769	
Other	..	..	..	392	381	446	
Total	..	..	..	1,816	1,830	2,215	(b)
Half-caste (a)	..	..	..	69	195	573	
Grand Total	..	..	..	3,173	5,216	6,200	7,026

(a) Persons who have European blood to the extent of one-half.

(b) Not available.

(ii) *European Population.* The number of the European population for various years since 1885 is shown in the following table. At 30th June, 1947, the European population was 3,412, of whom 2,604 were males and 808 females.

TERRITORY OF NEW GUINEA : EUROPEAN POPULATION.

Year.	Number.			Year.	Number.		
1885	64	1939	..	..	4,608
1933	3,191	1940	..	..	4,399
1937	4,286	1941	..	..	4,101
1938	4,445	1947	..	..	3,412

(iii) *Asiatic Population.* Malays seem to have been the first Asiatics brought by the Germans to German New Guinea; 37 of them were recorded on the mainland in 1885. About 1889 the New Guinea Company began to bring Chinese, Malays and Javanese in growing numbers from Singapore and Java to work on the plantations; in the year 1892 there were about 1,800 Asiatics on the mainland. By 1898 the number had decreased to 300 or 400, but it had risen to 1,830 at the time of the 1933 Census and at 30th June, 1941, numbered 2,228, of whom 2,199 were Chinese and 29 Japanese. The Japanese at the 1933 Census numbered 73. The Chinese provide the skilled artisans of the Territory, and many of them are small traders. At the census of 30th June, 1947, non-Europeans numbered 2,215, of whom Chinese (1,769) and Filipinos (276) constituted the major proportion. At the same date half-castes with one of the parents a European numbered 573.

2. *Native Population.*—As a large portion of the Territory is not under Government influence it is not possible to obtain reliable figures in regard to the number of the natives.

The following table shows those enumerated as at 30th June, 1941 :

TERRITORY OF NEW GUINEA : NATIVE POPULATION AT 30th JUNE, 1941.
(Including Indentured Labourers.)

District.	Children.			Adults.			Total.		
	Males.	Females	Persons.	Males.	Females	Persons.	Males.	Females	Persons.
Kieta ..	11,307	9,912	21,219	15,618	15,218	30,836	26,925	25,130	52,055
Madang ..	37,406	30,897	68,303	58,786	54,901	113,687	96,192	85,798	181,990
Manus ..	3,259	2,749	6,008	4,235	3,891	8,126	7,494	6,640	14,134
Morobe ..	29,334	26,348	55,682	42,541	39,076	81,617	71,875	65,424	137,299
New Britain ..	21,737	19,349	41,086	34,503	25,938	60,501	56,300	45,287	101,587
New Ireland ..	7,619	6,422	14,041	15,791	11,723	27,514	23,410	18,145	41,555
Sepik ..	32,223	27,772	59,995	44,049	45,060	89,109	76,272	72,832	149,104
Total ..	142,885	123,449	266,334	215,583	195,807	411,390	358,468	319,256	677,724

(a) Includes 6,560 Mission scholars, constabulary, etc., not distributed.

The number of natives indentured as labourers on 30th June, 1949, was 10,677. In addition, there were 19,575 non-indentured employees.

§ 4. The Natives.

1. **General.**—The natives are divided into two main groups—Melanesian and Papuan—the former, with a few exceptions, constituting the population of the Bismarek Archipelago, the Solomon Islands, and the coastal districts of the New Guinea mainland, the latter inhabiting the interior of the mainland. Odd tribes of Negritos exist in the mountains of New Guinea. There is a strain of Papuan, and, possibly, of Polynesian blood in the Admiralty Islanders, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians. (*See Official Year Book No. 16, p. 670, and Official Handbook of the Territory, Pt. V.*)

2. **Land Tenure.**—Native customs in regard to the ownership and use of land may be briefly outlined as follows. The ownership and use of the land are generally individual, although, in some rare cases, particularly in North Bougainville, the communal system exists. In districts where a great many coco-nut palms are growing on native lands it is often found that the land is the property of a chief or of one of the old men of the tribe, and that the coco-nut palms growing thereon are divided into small groves, and are the property of several members of the tribe. Customs with regard to the use of unoccupied forest lands vary. Right of inheritance to land is almost invariably through the maternal branch. (*See Official Year Book No. 17, p. 634, and Official Handbook of the Territory.*)

3. **Research Work.**—During the German occupation of the Territory a certain amount of research work was carried out, partly by scientific expeditions, and partly by missionaries and by a local resident. For many years an anthropologist was engaged consolidating the work already done, and extending it throughout the Territory. The results of his work appear in special reports.

4. **Education.**—Provision for the education of natives is made in the Ordinance of 1922-1935 under which the Administrator is authorized to establish schools, grant money therefor, prescribe instruction, and arrange for the training of teachers and other matters. Natives are liable to pay education tax, but none has been collected since 1922-23. The European teachers have been recruited from Education Departments in Australia. During the year ended 30th June, 1948, 26 schools were maintained by the Administration for native children, two for part-native and Malay children, and five each for European and Chinese children. In addition, the Missions conducted different

grades of schools having a total enrolment of 60,000 native students. To assist the Missions in their educational work, the Administration provides professional advice and certain items of equipment and text-books. In addition to this assistance, the sum of £21,750 was distributed amongst the Missions as grants-in-aid during the year ended 30th June, 1948. As well as those above, there are five schools for Europeans at Rabaul, Wau, Bulolo, Lae and Madang.

5. Health of Natives.—In a report dealing with the health of the natives in New Britain submitted before the 1914-18 War, it was stated that "the natives in the districts examined are not degenerate; but they are sick". The same qualification undoubtedly applies to the native population throughout the Territory.

The diseases taking the greatest toll of native life directly or through lowering vitality are—Malaria, respiratory diseases, dysentery, frambæsia, yaws, tropical ulcer, hookworm, filariasis and beri-beri.

The Health Department of the Administration consists of (i) a staff of medical officers, medical assistants and orderlies; (ii) native hospitals at Government stations and sub-stations (its staff also supervises hospitals on plantations); (iii) a laboratory; (iv) a training system for natives as medical orderlies; (v) a scheme of distribution of medical necessities; and (vi) leprosaria. It also undertakes the general oversight of sanitary conditions.

6. Missions.—Several mission societies have operated in the Territory. The Society of the Sacred Heart of Jesus worked in the Bismarck Archipelago, the Society of the Holy Ghost, the Franciscan Order and the Society of the Divine Word along the coast of North-East New Guinea from Sek to the Dutch border, and the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions are the Australian Methodist Mission in New Britain and New Ireland, the New Zealand Methodist Mission in Bougainville, the Liebenzell Mission in the Admiralty Group, the Lutheran Mission (supported and staffed by the Lutheran Churches in Australia and America) which worked along the coast of North-East New Guinea from Sek to the Papuan border, the Melanesian Mission (Anglican) in New Britain, the Seventh Day Adventist Mission in Bougainville, New Britain and the mainland of New Guinea, and the East and West Indies Bible Mission in the Central Highlands. All these societies include teaching with their missionary work.

§ 5. Land Tenure.

1. Acquisition of Land.—A short account of the modes of acquiring land appears in Official Year Book No. 19, p. 590, but considerations of space preclude its repetition.

2. Land Policy of the Present Administration.—The Land Ordinance 1922-1941 provides for sale as well as leasing of land belonging to the Administration. The divergence from the policy usually adopted by the British in the Pacific (including Papua), which provides for leasehold only, was made with a view to disposal by sale of the freehold properties taken over from Germans, which until 1927 were controlled by the Expropriation Board. The general land policy is based on the leasehold principle. All grants or leases contain a reservation to the Administration of all minerals, including mineral oil. Leases are for a term of 99 years except where a shorter period is provided. Lands, except in towns, are classified by a Land Board into land suitable for agriculture (Class A) and land not so suitable (Class B), and the unimproved value of the land is assessed. In the case of agricultural leases for more than 30 years the rent is 5 per cent. of the unimproved value, with power to remit during the first ten years, and subject to reappraisal every 20 years. Pastoral leases of lands of Class B may be granted for terms not exceeding 30 years, at a rental of $2\frac{1}{2}$ per cent. of the unimproved value, subject to reappraisal every 10 years. Agricultural leases are subject to improvement conditions and pastoral leases to stocking conditions. Leases of town allotments may be granted for terms not exceeding 99 years, at a rent to be fixed at such percentage of the unimproved value as is prescribed.

The following table shows the leases in force on 30th June, 1948 :—

TERRITORY OF NEW GUINEA : LEASES IN FORCE, 30th JUNE, 1948.

Tenure.	No. of Leases.	Area.
		Acres.
Agricultural leases	444	141,445
Pastoral leases	3	9,496
Residence and business leases	320	334
Special leases	56	707
Mission leases	443	1,552
Leases granted to Chinese in towns	213	58
Long period leases from German regime	115	5,189
Total	1,594	158,781

3. **Alienation and Occupation of Land.**—The area of the Territory is estimated at 59,520,000 acres, of which, at 30th June, 1948, 1.52 per cent. was alienated. The following table shows the distribution :—

TERRITORY OF NEW GUINEA : LAND TENURE, 30TH JUNE, 1948.

Particulars.	Acres.
Alienated—	
Held by Private Non-indigenous Inhabitants—	
Freehold	519,400
Leasehold	158,780
Held by the Administration	202,042
Native Reserves(a)	26,611
Total	906,833
Held by Natives	58,613,167
Total Area of Territory	59,520,000

(a) Vested in the Director of District Services and Native Affairs as Trustee for Natives.

4. **Registration of Titles.**—Under German law there was a system of registration of titles in a "Ground Book," but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in an Ordinance entitled the Lands Registration Ordinance 1924-1939.

§ 6. Production.

1. **General.**—The natives have been described as a people of peasant proprietors, practising a crude form of agriculture. Their gardens and groves furnish but a small amount of produce for oversea trade, and the exports of the Territory grew only as European plantations were made, and natives were employed to work them.

Scientific methods of cultivation have been adopted, and production has been greatly increased thereby.

2. **Agriculture.**—(i) *General.* There is provision in the Native Administrative Ordinance 1921-1938 of New Guinea for compelling native inhabitants to plant food crops for their own benefit, under certain circumstances. This type of compulsion has been mainly eliminated since 1942. The Ordinance was used in New Guinea, pre-war, when the villages were obviously short of food crops. Coco-nut plantings were mainly involved, as this constituted both a food and an economic crop.

Since the 1939-45 War, the activities of the Department of Agriculture, Stock and Fisheries have been concerned with the maintaining and improving of those establishments which were not destroyed during the war, viz. :—the Highlands Agricultural Experiment Station at Aiyura on the headwaters of the Ramu River where, at 5,500 feet to 6,000 feet altitude, observations are being made on the culture of tea, quinine, arabica coffee, soya bean, pyrethrum, native and introduced food, fodder, and cover crops and on the care of live-stock; and the Lowlands Agricultural Experiment Station at Keravat, near Rabaul, which suffered great damage under enemy occupation but where valuable material is being rehabilitated and propagated for future development, including special hybrids and selections of cocoa, coco-nut, robusta coffee, oil palm, manila hemp, native food crops, rice and other grains, and a large assortment of specimen plants of economic species.

The policy in the expanding programme of new work has been to develop close contact with the native peoples in order to help them in post-war rehabilitation and to determine the wisest lines of future development in each area. The Department also assists non-native settlers in an advisory capacity.

The principal agricultural products of the Territory are copra, cacao and coffee. With regard to copra plantations no accurate acreage figures are available owing to widespread war damage.

About 25 per cent. of the coco-nut bearing areas were destroyed during the war and the remainder is gradually being restored to production. The present production rate of copra is about 25,000 tons per annum, compared with the peak pre-war figure of about 76,400 tons in 1936-37. Very little replanting of coco-nuts has yet been undertaken, and no new areas have been planted. Cacao plantings suffered war-time losses to the extent of about 60 per cent. The present production rate is approximately 150 tons per annum, compared with the pre-war potential of about 1,000 tons, although this figure was never actually reached. Considerable activity is at present taking place in regard to cacao planting, the tendency being for planters to plant this crop wherever suitable land and labour are available.

With regard to robusta coffee, some 80 per cent. of pre-war plantings have been lost largely through the impact of war. Planters are not being encouraged to develop this crop. Very little loss was suffered by the limited pre-war plantings of arabica coffee but these are not of any great importance. Development of this crop is limited largely by the relative inaccessibility of suitable areas to cheap transport.

Rice, normally imported from Saigon and the East, is now obtained from Australia, but supplies are much lighter than formerly, and more highly priced. It is an objective of the Administration to develop adequate local production of this important staple.

(ii) *Plantations.* During 1934-35 the Administration disposed of the several plantations maintained by it with the exception of the demonstration plantation at Keravat. The principal crops grown on plantations are shown in the table hereunder for the year ended 30th June, 1940. The figures are not complete, but they give an indication of the progress of agriculture in the Territory to that date. Details are not available for later years.

TERRITORY OF NEW GUINEA : PLANTATIONS, 1939-40.

(Excluding Native Reserves.)

Crop.	Area Planted.(a)	Area Bearing.	Yield.
	Acres.	Acres.	Tons.
Coco-nuts	261,676	210,954	(b)71,583
Cocoa	5,827	2,301	570
Coffee	2,792	1,935	56
Rubber	2,481	1,591	95
Kapok	556	321	15
Native Food (c)	3,289	1,453	2,099
Other	912	106	..
Total	277,533	218,661	..

(a) Includes inter-planted crops.

(b) Copra; desiccated coco-nut, 596 tons, also produced.

(c) Native food of all kinds is mostly grown between young coco-nut palms not yet in bearing.

The area of plantations for various years from 1885 to 1940 is shown hereunder:—

TERRITORY OF NEW GUINEA: PLANTATIONS.

(Excluding Native Reserves.)

(Acres.)

Year ended June—	Total Area.	Area Planted.	Area under Coco-nuts (including Area not in Bearing).
1885	148	(a)	(a)
1895	2,152	(a)	(a)
1911	58,837	(a)	51,510
1914	84,488	(a)	76,847
1924	411,275	(a)	172,373
1932	460,942	216,730	211,882
1937	487,375	244,066	234,189
1938	496,118	262,547	239,976
1939	504,000	264,877	253,235
1940	525,965	277,533	261,676

(a) Not available.

3. **Live Stock.**—Little natural pasture is at present accessible in the Territory of New Guinea, though investigations have proved that good cattle country exists in the vicinity of the lower Sepik River, the nearest point of access being Marienberg, 38 miles from the river mouth. The swampy country through which the Sepik passes is not itself suitable for cattle. Apart from pasture lands which have been discovered in the Sepik area, in the Markham Valley, there is excellent cattle country from Lae to Wau, and further inland to Ramu and Purari. In the gold-fields area, also, large valleys of open country exist, probably suitable for grazing and stock-raising. An experiment is at present being conducted by the E. J. Hallstrom Trust in the breeding of Romney Marsh sheep at Nondugl in the Central Highlands District of the Territory of New Guinea.

Soils are variable and often the terrain is broken; however, the loose, coral-derived soils and those from pumice and volcanic sands are gently undulating. The foothill soil is heavier, being generally a mixture of volcanic and sedimentary types. The hinterland soils are often heavy and lateritic. Generally, there is more good land on the island groups than on the mainland, except in certain valleys such as the Markham and Sepik.

District Agricultural Stations are being established in various parts of the Territory. In the selection of sites for these, special consideration has been given to areas which suffered most under enemy occupation. Each of these Stations is in the charge of a District Agricultural Officer whose functions are largely those of extension. As a first step towards improving live stock breeds and animal husbandry methods, a piggery has been established at each Station and stocked with imported Berkshires.

Pig numbers in many parts of the country were almost entirely annihilated during the Japanese occupation. As the pig is one of the chief sources of meat to most natives, a serious unbalancing of the native diet has been brought about in such areas. Pigs are also of considerable importance to the native people in social prestige, wealth and as a medium of exchange. With a view to increasing the number and the quality of pigs at present available, small studs of pure breeds are being formed at Lae, Madang, Wewak, Aitape, Rabaul and Sohana. From these studs, pigs of a superior type will be made available to natives, especially good type boars. It is hoped in this way gradually to improve the standard of native pigs.

A Quarantine Ordinance is in operation in the Territory and this is largely under the control of the Department of Public Health, in co-operation with the Department of Agriculture, Stock and Fisheries.

All stock introduced is carefully inspected in Australia prior to shipment, and on arrival is again inspected and treated for internal and external parasites. The stock is not allowed to land if parasites not already existent in the Territory are present on inspection.

4. **Timber.**—An investigation of the timber resources was made by the Commonwealth Inspector-General of Forests, and a report in connexion therewith was published in 1926. According to this report, while offering no prospects of immediate gain to large sawmilling interests, the Territory possesses forest potentialities of a high order. Surveys of the timber resources of the Morobe District indicate that there are

approximately 500 million super. feet of timber in the pine forests of the Bulolo Valley. This is supporting sawmills cutting for local use. It is proposed to harvest this forest over a period of years and progressively re-afforest the area. Sawmills controlled by the Administration are established at Lae and Keravat, and are supplying local requirements. The log export trade has not yet recovered, but in 1948 shipments of some 400,000 super. feet of timber in the log were made.

The Forestry Ordinance 1936-1937 provides for the issue of permits and licences to cut timber, but at present the policy is to call tenders for timber areas as they can be made available. Timber growing on native lands cannot be acquired by private purchasers directly from the natives, but must be obtained through the Administration. A royalty is payable on all forest produce taken under a permit or licence. Some 26 permits, which were in force when the war intervened, have been extended to cover the five-year period of suspension, and cover approximately 200,000 acres.

5. **Fisheries.**—The wealth of the waters of the Territory has been little exploited. Fish are caught at many places along the coast to supply the small local demand of the natives and of the few resident Europeans. Pearl-shell is exported in fair quantities, while *bêche-de-mer*, trochus-shell and tortoise-shell also figure amongst the exports. The value of marine products exported in 1947-48 was £21,092 compared with £9,255 in 1940-41. A survey of the Territorial waters of the Territory is at present in progress with a view to ascertaining and developing the fisheries resources and the shell industries. The Commonwealth Scientific and Industrial Research Organization is co-operating in this survey.

6. **Mining.**—Except for gold there has been little mining in New Guinea. Gold has been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers, and in tributaries of the Sepik River. Rich gold was discovered in the Morobe District in 1926: the field is situated about 90 miles (40 by air) inland from Lae, the nearest coastal port. Communication is established with the coast by a regular aeroplane service and by road transport. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kabenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron occurs as magnesite and hæmatite in the Baining District, apparently in large quantities. Sulphur occurs in several localities in the volcanic regions of the Territory. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland.

Mining is regulated by the Mining Ordinance 1928-1940. Copies of the Ordinance and Regulations made thereunder may be obtained from the Secretary, Department of External Territories, Canberra.

The following table shows the production of gold during the years 1937-38 to 1940-41 and 1947-48:—

TERRITORY OF NEW GUINEA : GOLD PRODUCTION.

Year.	Quantity.	Value.(a)
	Fine oz.	£
1937-38	223,929	1,935,954
1938-39	237,795	2,153,018
1939-40	278,922	2,917,526
1940-41	263,097	2,808,835
1947-48	126,092	851,570

(a) Valued at average price realized for fine gold in Australia.

Since the high market price of gold has been maintained, the search for profitable areas in various parts of the Territory has not diminished and systematic testing by drilling and other means has been undertaken on alluvial areas previously considered unworthy of attention. Although there were no new discoveries of alluvial or reef gold during 1948, work proceeded steadily on the known gold-bearing areas.

A search for petroleum has been actively conducted on the mainland. The Petroleum Ordinance 1936 has been superseded by the Petroleum (Prospecting and Mining) Ordinance 1938-1947, which has facilitated the carrying out of geological surveys and prospecting activities generally. On 30th June, 1948, two permits to search for petroleum were in force.

§ 7. Trade.

1. **Customs Tariff.**—With the exception of high revenue rates on ale, spirits, beverages and tobacco and a duty of 3d. per gallon on petrol, kerosene and lubricating oil, the tariff of the Territory of New Guinea is generally on a 10. per cent. ad valorem basis. Only 72 items are mentioned in the import schedule, of which approximately 60 are on the free list consisting of articles for use by the Administrator, the Trade Commissioners and the Missions, and medical supplies, live stock, meat, fish, fresh fruit, vegetables and certain essential manufactures for use in the Territory. The rate of duty for the remaining items as well as for all other goods not mentioned in the schedule is 10 per cent. ad valorem. No preferential tariff rates are provided in the schedule.

Export duties are levied on copra, trepang, shell, feathers and sulphur. When the price, or the assessed value of copra is less than £5 15s. per ton no tariff is imposed, but when the price exceeds this figure but is not more than £11 per ton 2s. 6d. per ton is charged; thereafter the charge increases on a sliding scale to 11s. 6d. per ton as the price rises to £18, with an additional 2s. per ton for every further increase of £1 in the price of copra. Imports in 1947-48 amounted to £3,105,098 on which £335,276 was received in import duties, while £60,491 was paid in export duties and royalties.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) 1930 for the free entry into Australia of certain goods produced and imported direct from the Territory of New Guinea (see Chapter XII. "Trade"), and a proclamation of 25th September, 1935, exempted from primage duty goods produced or manufactured in the Territory.

2. **Imports and Exports.**—Values of the principal items of imports and exports for the years 1937-38 to 1940-41 and 1947-48 are shown below. The values of exports are expressed in Australian currency, but it is not possible to determine accurately the currency of the £ in the table of imports.

TERRITORY OF NEW GUINEA : IMPORTS AND EXPORTS.

(£.)

Particulars.	1937-38.	1938-39.	1939-40.	1940-41.	1947-48.
IMPORTS.					
Foodstuffs of animal origin ..	157,391	152,023	165,637	127,464	441,391
Foodstuffs of vegetable origin ..	190,057	158,895	104,751	145,070	489,168
Spirituous and alcoholic liquors ..	52,385	54,969	50,161	46,753	72,186
Tobacco and preparations thereof	58,155	63,122	61,160	51,931	170,545
Live animals ..	1,843	1,328	664	508	16,511
Animal substances ..	961	1,124	1,587	179	..
Vegetable substances and fibres ..	4,191	3,397	3,640	2,386	3,997
Apparel, textiles and manufactured fibres ..	182,590	138,077	130,360	93,164	420,837
Oils, fats and waxes ..	72,080	65,901	97,370	70,153	250,196
Paints and varnishes ..	11,044	10,934	9,932	7,818	23,643
Stones and minerals ..	16,030	8,164	4,314	5,439	1,424
Metals, manufactures and machinery ..	635,991	470,781	387,125	252,750	683,334
Rubber and leather and manufactures thereof ..	15,663	16,365	21,668	16,739	35,325
Wood and wicker ..	33,565	20,195	20,617	9,105	13,054
Earthenware, cement, glass, etc.	14,251	13,215	13,549	8,383	25,751
Paper and stationery ..	24,026	22,829	24,169	19,122	69,613
Jewellery and fancy goods ..	21,328	14,133	10,231	10,045	49,284
Optical and scientific instruments	21,377	22,318	14,750	17,140	28,825
Drugs, chemicals and fertilizers ..	46,878	46,103	45,101	45,539	66,830
Miscellaneous ..	50,561	47,992	41,311	30,441	198,184
Specie ..	31,500	..	..	..	..
Total ..	1,642,467	1,340,835	1,268,097	962,129	3,105,098

TERRITORY OF NEW GUINEA: IMPORTS AND EXPORTS—*continued.*
(£.)

Particulars.	1937-38.	1938-39.	1939-40.	1940-41.	1947-48.
EXPORTS.					
Copra	847,734	727,949	504,627	266,970	625,662
Cocoa	4,475	6,580	11,340	11,680	16,976
Ivory nuts	162	..	7	..	..
Trepang	2,250	2,025	1,680	1,870	..
Shell (trochus, etc.)	12,478	10,560	10,227	7,383	21,092
Tortoise-shell	91	89	49	2	..
Gold	2,028,980	2,129,263	3,021,731	2,797,226	851,570
Desiccated coco-nut	73,423	69,960	89,050	93,850	..
Rubber	242	4,050	13,328	19,027	..
Miscellaneous	25,334	23,419	29,081	55,976	411,775
Total	2,995,169	2,973,895	3,681,120	3,253,984	1,927,075

Included in "Miscellaneous" in the table above are surplus war stores exported by purchasers.

3. *Direction of Trade.*—Particulars of the countries of origin of the imports into the Territory of New Guinea and of destination of the goods shipped therefrom during the years 1939-40, 1940-41 and 1947-48 are given in the following table.

TERRITORY OF NEW GUINEA: DIRECTION OF TRADE.
(£.)

Country.	Imports.			Exports.		
	1939-40.	1940-41.	1947-48.	1939-40.	1940-41.	1947-48.
Australia ..	583,291	489,369	2,109,157	3,283,246	3,039,767	1,910,007
United Kingdom	119,042	79,136	149,217	220,200	47,599	..
Other British ..	55,306	63,745	52,403	..	29,976	3,366
China.. ..	87,412	43,317	129,177	11,115	1,870	..
Japan	34,921	28,063	..	7,266	28,822	..
France	2,523	1,275	..	12,291	..	..
Germany	17,430	4,595	..	2,669	..	..
U.S.A.	247,189	167,437	398,163	62,529	21,131	13,702
Other.. ..	120,983	85,192	266,981	81,804	84,819	..
Total	1,268,097	962,129	3,105,098	3,681,120	3,253,984	1,927,075

The bulk of the imports into the Territory of foodstuffs, beer, coal, paints, boats, launches and soap comes from Australia, which also supplies large quantities of machinery and metal manufactures, drugs, explosives, tobacco, cigarettes, apparel, boots, leather manufactures, timber, stationery and polishes.

§ 8. Shipping and Communication.

1. **General.**—Prior to the Japanese invasion a subsidized mail service between New Guinea and Australia was maintained by Burns, Philp and Co. Ltd., which also operated a two-monthly non-subsidized service between Australia, New Guinea, Hong Kong and Saigon. The Dutch Royal Packet Navigation Company's vessel called at Rabaul every five weeks *en route* from Singapore to Australia. Shipping within the Territory is regulated by the Shipping Ordinances 1936 and the Coastal Shipping, Ports and Harbours Regulations.

2. **Oversea Tonnage in 1947-48.**—The number and net tonnage of oversea vessels which entered and cleared the Territory during 1947-48 are shown hereunder.

TERRITORY OF NEW GUINEA : SHIPPING, 1947-48.

Nationality.	Vessels Entered.		Vessels Cleared.		Total.	
	Number.	Net Tonnage.	Number.	Net Tonnage.	Number.	Net Tonnage.
American	2	3,888	2	3,888	4	7,776
British	50	128,371	42	126,032	92	254,403
Total	52	132,259	44	129,920	96	262,179

3. **Shipping, Ports and Inland Waterways.**—Shipping services on a regular basis ply between Australia and the Territory, providing passenger and cargo accommodation. A number of cargo vessels has been chartered at various times to supplement the regular service. Vessels of the Eastern and Australian Shipping Line on the Australia-Hong Kong service make calls at Rabaul with imports from Hong Kong. The Australian Government is responsible for the coastal and inter-island shipping service and it provides the vessels for the purpose.

Main ports of call for oversea vessels are established at Lae and Madang (mainland), Rabaul (New Britain), Kavieng (New Ireland), Lorengau (Manus) and Kieta (Bougainville). Ports proclaimed under the Coastal Shipping Ports and Harbour Regulations for the service of local vessels are, in addition to the main ports above-mentioned, Salamaua, Finschhafen, Wewak, Aitape and Wanimo (mainland), Gasmata and Talasea (New Britain), Namatanai (New Ireland) and Buka Passage (Bougainville).

There are no prepared inland waterways. The natural river system is not generally suitable for vessels except those of small tonnage. There is a fair measure of traffic on the Sepik River.

4. **Land Communication.**—Means of communication on land are scanty. There are no railways. Roads lead from Rabaul to places within 30 or 40 miles, and there is a road 200 miles long in New Ireland and also a road from Lae to Wau in the Morobe District. Elsewhere there are few roads outside plantations and the District Officers' stations.

5. **Air Transport and Civil Airfields.**—The discovery of gold in New Guinea resulted in great aviation activity in the vicinity of the gold-fields. On account of the mountainous country and dense undergrowth between the coast and the gold-fields the task of transporting food and stores to the fields and of bringing the gold to the seaboard by land was an irksome and costly process. The fields are situated about 90 miles (40 by air) inland from Lae, and aircraft cover the distance in less than an hour.

Qantas Empire Airways Ltd. operates a regular service from Australia to Lae and Rabaul. Commercial aircraft operators located at Lae maintain passenger and freight-carrying services to Wau, Bulolo, Mount Hagen, Kainantu, Goroka, Finschhafen, Madang, Wewak, Aitape, Maprik and Angoram. Charters are undertaken to other parts of the Territory as occasion arises.

Further reference to New Guinea air activities is contained in Chapter V. "Transport and Communication" (see p. 204).

§ 9. Revenue and Expenditure.

Details of the revenue collected from various sources and the expenditure during each of the years 1937-38 to 1940-41 and 1947-48 are given hereunder :—

TERRITORY OF NEW GUINEA : REVENUE AND EXPENDITURE.

(£.)

Particulars.	1937-38.	1938-39.	1939-40.	1940-41.	1947-48.
REVENUE.					
Taxation—					
Customs	247,062	214,629	207,261	158,221	418,618
Licences	13,087	13,796	12,667	10,408	8,148
Native Head Tax	20,481	21,417	20,025	21,786	..
Stamp duties	6,182	6,467	5,978	3,906	1,312
Postal	47,240	27,163	20,340	15,583	21,349
Lands	16,179	18,416	15,281	16,357	5,778
Mining—					
Royalty on gold	97,464	107,975	143,906	119,792	35,581
Other	19,479	16,403	40,298	50,995	13,321
Fees and fines	19,285	17,947	16,155	13,615	8,367
Sales of stores, etc.	2,472	2,170	2,428	2,011	27,002
Forestry .. .. .	..	..	..	..	42,803
Grant by Commonwealth Govern- ment .. .. .	..	..	..	..	1,109,494
Miscellaneous	17,467	14,453	12,351	11,076	7,430
Total	506,398	460,836	496,690	423,750	1,699,203
EXPENDITURE					
Treasury and Audit	52,570	54,736	60,628	45,530	113,794
Agriculture	17,722	19,424	20,337	19,475	47,782
Public Justice	32,809	34,245	34,530	31,606	81,456
Public Health	80,377	89,784	85,207	80,162	223,749
Public Works	30,954	34,802	28,097	22,730	274,599
District Services and Native Affairs	115,648	125,876	127,296	106,107	584,775
New Works	70,011	69,146	63,257	48,509	114,736
Native Welfare	7,185	6,453	6,621	6,078	(b)
Forestry .. .. .	..	..	..	..	33,972
Other	2101,337	68,114	74,641	71,595	182,066
Total	508,613	502,580	500,614	431,792	1,656,929

(a) Includes £40,011, expenditure due to the volcanic eruption.

(b) Included elsewhere.

For information for 1945-46 and 1946-47 see Papua, § 7, p. 371.

TRUST TERRITORY OF NAURU.

1. General.—Nauru is an oval-shaped atoll about 12 miles in circumference, having an area of about 5,263 acres, of which approximately two-thirds is phosphate-bearing. It is situated in longitude 167° E., and is 26 miles south of the Equator. Portion of the island between the sandy beach and the coral cliffs is fertile, and it is there that the Nauruans reside. With the exception of a small fringe around an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system

of land tenure is governed by an old custom, and, with the exception of small allotments held by the Government, the British Phosphate Commissioners and the Missions, the whole of the island is owned by individual natives. The average shade temperature ranges between 72° and 95° F., and the average humidity between 70 and 80 per cent. The average rainfall is 85 inches, but droughts occasionally occur, and in 1916 and 1917 only 40 inches were received for the two years. Similarly in 1938 only 20.94 inches were recorded.

2. **History.**—The island, discovered by Captain Fearn in 1798, was annexed by Germany in 1888, and prior to 1914 was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Naval and Military Expedition at Rabaul, and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate for its administration should be conferred upon His Britannic Majesty. The mandate was confirmed by the Council of the League of Nations on 17th December, 1920. On 2nd July, 1919, the British, Australian and New Zealand Governments agreed that the administration (which, since 1915, had been in charge of an official appointed by the British Colonial Office) should be vested in an Administrator who took up duty in June, 1921. The agreement between the three Governments was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and is shown in the Schedule to that Act. A supplementary agreement concerning Nauru was drafted in May, 1923, and ratified by the Commonwealth Parliament by the Nauru Island Agreement Act 1932.

On 25th August, 1942, nine months after the outbreak of the war in the Pacific, communications with Nauru ceased, and the island was occupied by Japanese forces. It was re-occupied by a joint Australian Naval and Military Force on 14th September, 1945, and civil administration was re-established on 1st November, 1945.

3. **Trusteeship Agreement.**—On 1st November, 1947 the General Assembly of the United Nations approved a Trusteeship Agreement for the Territory of Nauru submitted by the Governments of Australia, New Zealand and the United Kingdom in substitution for the terms of the mandate under which the Territory had been administered. This Agreement designates the Governments of Australia, New Zealand and the United Kingdom as the Joint Administering Authority, with the Government of Australia continuing, on behalf of the Administering Authority, to exercise full powers of legislation, administration and jurisdiction in and over the Territory. The terms of the Agreement are as follows :—

Preamble : In pursuance of a Mandate conferred upon His Britannic Majesty, the Territory of Nauru has been administered in accordance with Article 22 of the Covenant of the League of Nations by the Government of Australia on the joint behalf of the Governments of Australia, New Zealand and the United Kingdom of Great Britain and Northern Ireland.

The Charter of the United Nations, signed at San Francisco on 26th June, 1945, provides by Article 75 for the establishment of an international trusteeship system for the administration and supervision of such territories as may be placed thereunder by subsequent individual agreements.

His Majesty desires to place the Territory of Nauru under the trusteeship system and the Governments of Australia, New Zealand and the United Kingdom undertake to administer it on the terms set forth in the present Trusteeship Agreement.

Therefore, the General Assembly of the United Nations, acting in pursuance of Article 85 of the Charter, approves the following terms of the trusteeship for the Territory of Nauru in substitution for the terms of the Mandate under which the Territory has been administered :—

Article 1. The Territory to which the Trusteeship Agreement applies (hereinafter called the Territory) consists of the island of Nauru (Pleasant Island) situated approximately 167° longitude East and approximately 0° 25' latitude South, being the Territory administered under the Mandate above referred to.

Article 2. The Governments of Australia, New Zealand and the United Kingdom (hereinafter called the Administering Authority) are hereby designated as the joint authority which will exercise the administration of the Territory.

Article 3. The Administering Authority undertakes to administer the Territory in accordance with the provisions of the Charter and in such a manner as to achieve in the Territory the basic objectives of the international trusteeship system, which are set forth in Article 76 of the Charter.

Article 4. The Administering Authority will be responsible for the peace, order, good government and defence of the Territory, and for this purpose, in pursuance of an agreement made by the Governments of Australia, New Zealand and the United Kingdom, the Government of Australia will on behalf of the Administering Authority and except and until otherwise agreed by the Governments of Australia, New Zealand and the United Kingdom continue to exercise full powers of legislation, administration and jurisdiction in and over the Territory.

Article 5. The Administering Authority undertakes that in the discharge of its obligations under Article 3 of this agreement—

1. It will co-operate with the Trusteeship Council in the discharge of all the Council's functions under Articles 87 and 88 of the Charter;

2. It will, in accordance with its established policy—

(a) take into consideration the customs and usages of the inhabitants of Nauru and respect the rights and safeguard the interests both present and future of the indigenous inhabitants of the Territory; and in particular ensure that no rights over native land in favour of any person not an indigenous inhabitant of Nauru may be created or transferred except with the consent of the competent public authority;

(b) promote, as may be appropriate to the circumstances of the Territory, the economic, social, educational and cultural advancement of the inhabitants;

(c) assure to the inhabitants of the Territory, as may be appropriate to the particular circumstances of the Territory and its peoples, a progressively increasing share in the administrative and other services of the Territory and take all appropriate measures with a view to the political advancement of the inhabitants in accordance with Article 76 (b) of the Charter;

(d) guarantee to the inhabitants of the Territory, subject only to the requirements of the public order, freedom of speech, of the press, of assembly and of petition, freedom of conscience and worship and freedom of religious teaching.

Article 6. The Administering Authority further undertakes to apply in the Territory the provisions of such international agreements and such recommendations of the specialized agencies referred to in Article 57 of the Charter as are, in the opinion of the Administering Authority, suited to the needs and conditions of the Territory and conducive to the achievement of the basic objectives of the trusteeship system.

Article 7. In order to discharge its duties under Article 84 of the Charter and Article 4 of the present agreement, the Administering Authority may take all measures in the Territory which it considers desirable to provide for the defence of the Territory and for the maintenance of international peace and security.

4. Administration.—The administration of the island is vested in the Administrator, who is obliged to conform to instructions issued by the Government which appointed him, and all ordinances made by him are subject to confirmation or disallowance by the Governor-General of Australia acting on the advice of the Federal Executive Council. All administration expenses are met from local revenue and

phosphate royalties. Native industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. An agency of the Commonwealth Savings Bank has been established. There is a co-operative store managed to a large extent by the natives. The store books, however, are audited by Government officers. Natives are not allowed to carry or be in possession of firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.

5. **Population.**—The population figures on 1st April, 1939, 31st December, 1940, 1941 and 1946 and 30th June, 1947 and 1948, are given hereunder. Details are not available for the years 1942 to 1945, the period of Japanese occupation :—

NAURU : POPULATION.

Race.	1st April, 1939.	31st Dec., 1940.	31st Dec., 1941.	31st Dec., 1946.	30th June, 1947.	30th June, 1948.
Europeans	171	192	68	159	192	247
Chinese	1,512	1,350	584	787	1,163	1,370
Nauruans (a)	1,765	1,761	1,827	1,369	1,379	1,448
Other	44	49	193	33	31	97
Total	3,492	3,352	2,672	2,348	2,765	3,162

(a) The natives of Nauru are Micronesians.

During the year ended 30th June, 1948, there were 105 births, compared with 58 during the year ended 30th June, 1947. In 1947-48 there were 30 marriages (two between Europeans) and 35 deaths.

6. **Health.**—Cases of the usual diseases known in the Pacific occur. Venereal disease is rare, but elephantiasis is occasionally met with. An area has been set apart for the segregation of lepers, and the latest methods of treatment are applied. The total number of persons receiving treatment at 30th June, 1948, was 85 of whom 10 were in segregation at the Leper Hospital. Two hospitals are maintained on the island, one by the Administration for Nauruans, and one by the British Phosphate Commission for its employees. In common with other natives, the Nauruans are very susceptible to tuberculosis and influenza, and in 1921 an influenza epidemic caused the deaths of 230 islanders. Dysentery, both amœbic and bacillary, is endemic. A regular anti-mosquito campaign is conducted. Steps have been taken by the authorities to improve the water supply and to provide efficient sanitation generally. Every Nauruan is required to undergo a medical examination once a month. Baby clinics have been established to give help and advice to Nauruan mothers in regard to infant nurture.

7. **Education.**—Formerly the education of Nauruan and other native children was undertaken by the Missions subsidized by the Administration, but on 1st October, 1923, the Administration assumed responsibility for education. There are 5 primary schools for native, and one for European, children. A total of 389 native, 33 European and 2 Chinese children were enrolled at 30th June, 1948. The European school is in charge of a teacher on loan from the Victorian Education Department, who also supervises education matters generally.

The curriculum is similar to that of corresponding schools in Australia, and the teaching is, as far as possible, wholly in English. Education is compulsory between the ages of six and sixteen for Nauruan and other native children.

8. **Judiciary.**—The judicial power is vested in the Administrator in a Central Court and a District Court. The right of appeal is provided.

9. **Religion.**—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru.

10. **Phosphate Deposits.**—(i) *General.* From 1906 to 1919 the deposits were worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island

(about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony administered by the Colonial Office). The quantity remaining on Nauru has been estimated at about 70,000,000 tons, and the exports average 85 per cent. to 88 per cent. of tricalcium phosphate.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it had workings) were bought by the British, Australian and New Zealand Governments in 1919 for £3,500,000, the purchase money being contributed in the proportions of 42, 42, and 16 per cent. respectively. The Agreement of 2nd July, 1919, provides for the working of the deposits by the British Phosphate Commission of three members, one appointed by each Government; and the three countries are entitled to receive the output in the same proportions of 42, 42, and 16 per cent.

(ii) *Royalty on Phosphate.* Under a revised agreement between the British Phosphate Commissioners and the Nauruan landowners, an increased royalty of 1s. 1d. per ton of phosphate exported has been payable from 1st July, 1947, as follows:—

- (a) 6d. per ton to be paid to the Nauruan landowner concerned;
- (b) 3d. per ton to the Administrator for the benefit of the Nauruan people;
- (c) 2d. per ton to the Administrator to be held in trust for the Nauruan landowner concerned and invested at compound interest for a period of 20 years.

The capital will then remain invested and the interest thereon will be paid to the landowner.

- (d) 2d. per ton to the Administrator to be held in trust for the Nauruan community and invested until the year 2000 at compound interest.

From 1st July, 1947 the lump sums payable to landowners from whom phosphate-bearing lands are leased were also increased to £45 per acre, with a minimum payment of £7 10s. for areas less than an acre.

(iii) *Nauru and Ocean Island Phosphate Industry.* The following table gives particulars regarding exports of phosphate during the years 1938-39 and 1940-41 to 1947-48:—

NAURU AND OCEAN ISLAND : EXPORTS OF PHOSPHATE.

Year.			Total.	To Australia.	To New Zealand.
			Tons.	Per cent.	Per cent.
1938-39	..	..	1,228,590	67.06	23.63
1940-41	..	..	626,149	50.14	38.76
1941-42	..	..	144,454	53.79	46.21
1942-46 (a)	..	..	..	..	..
1946-47	..	..	213,875	87.07	12.93
1947-48	..	..	468,839	72.77	27.23

(a) Period of, and immediately following, Japanese occupation.

(iv) *Accounts of Commission.* A statement of Nauru and Ocean Island activities for the years 1938-39 and 1940-41 to 1947-48 is given hereunder:—

NAURU AND OCEAN ISLAND : SALES OF PHOSPHATE.

(£.)

Heading.	1938-39.	1940-41.	1941-42.	1942 to 1946.(a)	1946-47.	1947-48.
Receipts from sales, etc.	909,027	749,354	387,464	..	551,537	1,040,086
F.o.b. cost, including interest on capital, sinking fund, etc.	906,133	745,233	327,607	..	508,224	1,037,914

(a) Period of, and immediately following, Japanese occupation.

During the period of the Japanese occupation from August, 1942 to September, 1945, while waiting to resume activities at Nauru and Ocean Island, the Commission was engaged in meeting the phosphate requirements of Australia and New Zealand from

other available sources. Reconstruction of equipment destroyed during the Japanese occupation has progressed steadily at both islands and should be completed by the target date of June, 1950.

The amount due by the British Phosphate Commission to the partner Governments for purchase-money and other capital sums was £3,666,457 on 30th June, 1921, and at 30th June, 1942, this had been reduced to £3,024,373. The partner Governments agreed to a suspension of interest and sinking fund payments from 1st July, 1942, while operations at Nauru and Ocean Island were curtailed. Modified payments were resumed in 1946-47, pending a review of the position in 1950, when it is anticipated that reconstruction will be completed. The redemption fund now totals £507,127.

(v) *Employees.* Apart from a limited number of Europeans and a few Pacific Islanders, the employees are Chinese engaged under a two years' contract. Increasing numbers of Nauruans are being employed, mainly in trade capacities.

(vi) *Christmas Island Phosphates.* It may not be inappropriate to refer here to the phosphate deposits on Christmas Island in which the Australian Government is interested. The concession to work phosphate at Christmas Island, situated in the Indian Ocean near Java, has been held since 1897 by the Christmas Island Phosphate Company Limited, a private company incorporated in England.

The Australian and New Zealand Governments, jointly, have acquired the Company's interests and assets at Christmas Island as at 31st December, 1948.

The undertaking will be controlled by an authority to be appointed by the Australian and New Zealand Governments, and the phosphate will be distributed by the British Phosphate Commissioners, in conjunction with supplies obtained from Nauru and Ocean Island, to meet the agricultural requirements of Australia and New Zealand.

11. *Trade.*—The Customs Tariff of Nauru provides for the free admission of all goods other than cigars, cigarettes, tobacco, spirits, wines, beer, cider, and perry, and cylinder blocks for motor cycle engines. Articles imported by the Administration for its own use and spirits for scientific purposes are exempt.

The Tariff rates apply to all countries alike. Information regarding imports and exports for the years 1939 to 1947-48 is shown in the following table.

NAURU : IMPORTS AND EXPORTS.

Heading.		1939.	1940.	1941.	1.1.42 to 30.6.47 (a)	1947-48.
Imports ..	£	170,624	192,749	106,978	543,916	621,764
Exports—						
Phosphate ..	tons	932,100	808,400	99,150	96,473	263,507
	£	605,974	541,168	69,375	192,946	527,014

(a) Includes period of Japanese occupation.

Of the total imports Australia supplied £466,636 or 75 per cent. during 1947-48; the balance came mainly from the United Kingdom, New Zealand, the United States, China and Canada in that order.

In 1947-48 179,257 tons of phosphate were exported to Australia, and 84,250 tons to New Zealand.

12. *Revenue and Expenditure.*—The revenue and expenditure of the Administration during the years 1939 to 1947-48 were as follows :—

NAURU : REVENUE AND EXPENDITURE.

(£.)

Heading.		1939.	1940.	1941.	1.1.42 to 30.6.47 (a)	1947-48.
Revenue		33,084	27,104	12,023	28,038	23,745
Expenditure		20,391	26,223	23,951	107,543	96,347

(a) Includes period of Japanese occupation.

Of the revenue for the year ended 30th June, 1948, royalty on phosphate amounted to £7,977, post office and radio receipts, £4,792, import duties, £1,706 and licences and internal revenue, £2,082. At 30th June, 1948, the accumulated funds of the Administration amounted to £4,175.

CHAPTER XI.—LABOUR, WAGES AND PRICES.

A.—RETAIL PRICES AND PRICE INDEXES.

§ 1. Collection of Information as to Retail Prices.

The retail prices of the extensive range of commodities and services in common demand (commonly referred to as the "regimen") used in compiling the All Items ("C" Series) Retail Price Index have been ascertained at frequent and regular intervals since 1923 for each of the six capital cities and for 27 of the more important towns of Australia. Comparable information is available for the month of November in each year 1914 to 1922 for each of the six capital cities. The complete list of items covered by the retail price regimen is published in the annual *Labour Report*, and a summary of the main groups and sections of the regimen is given in § 6 hereof.

The retail prices of food and groceries in approximately 200 towns throughout Australia were collected as at November of each year from 1913 to 1942, when collection was discontinued.

Retail prices of food and groceries and average rentals of houses for earlier years extending back to 1901 were collected by this Bureau, and in some cases have been recorded by the Statisticians of various States as far back as 1864.

The methods by which prices used in the "C" Series Index are ascertained and the measures adopted to ensure their accuracy and comparability are briefly as follows:—

- (i) Representative and reputable retailers are selected for each city and town covered by the Index and each is required to furnish a return of prices monthly in respect of food and groceries and quarterly in respect of other items. Prices for each item are obtained where practicable from about ten retailers in each of the capital cities, and from about five retailers in each of the provincial towns.
- (ii) These returns are collected under authority of the Census and Statistics Act 1905-1949, which requires that returns be supplied accurately and promptly and ensures that particulars supplied by individual retailers will not be divulged to competitors or to any other person or Government authority. Penalties are provided against failure to supply returns, against supplying false information and against failure to answer truthfully any question asked by an authorized officer in respect of the contents of the return.
- (iii) The actual collection of returns is carried out by qualified Field Officers of the Commonwealth Bureau of Census and Statistics working under the supervision of the Statisticians of the respective States. These Field Officers have very wide powers of investigation, including entry of premises and inspection of goods, records, etc.

(iv) The Field Officers not only receive and check returns but visit the retail shops concerned, whenever necessary, to verify returns. In respect of articles of clothing and the like, where variation of quality may be considerable, Field Officers are equipped with samples of the goods used for price comparisons. In such cases the Field Officers visit every retail informant at each quarterly collection and personally inspect the relevant goods and prices thereof.

(v) Before each quarterly collection Supervising Field Officers review the standards of the whole of the items for which prices are collected after making extensive inquiries among manufacturers, wholesalers and retailers. These Supervising Field Officers periodically accompany Field Officers at their price collections and check their work. This not only ensures accuracy and assiduity but also that all Field Officers work on uniform lines and that, as far as care and effort can make it possible, prices for identical goods and quality will be recorded at all times and for all places.

(vi) The list of items in the regimen and the standards thereof are revised from time to time to keep them in harmony with changing conditions. Where such changes become necessary suitable adjustment is made in computing the retail price index to ensure that it reflects changes in price with due precision and that it is not vitiated by the influence of other changes. (*See also* § 8 hereof.)

(vii) Returns of rents for unfurnished houses of four and five rooms are made at the middle of each quarter by a representative number (ranging up to 30) of house agents in each city and town covered by the Index, for brick and wooden houses respectively, classified according to number of rooms. These returns show the weekly rental of a substantial number of individual houses, each of which is selected by the Field Officer as suitable for inclusion in a sample designed to measure the quarterly ratio of change in weekly rentals. The aim is to measure variations which may be equivalent to change in price for a constant standard. The ratio of change is used to vary basic average rentals derived from the Census of 1933 and other records. Although expressed in money terms, the average rentals as published are essentially indexes. As such they do not necessarily indicate the average amount of rental actually paid for all rented houses, and still less do they indicate the rental at which vacant or new houses can be rented.

§ 2. Retail Price Indexes.

1. **General.**—The basic principle of a retail price index is relatively simple. It is to select commodities representative of the field to be covered and to combine their prices at regular intervals in accordance with their relative importance in that field. The aim is to measure the degree of change in prices for the selected field taken as a whole.

In practice the application of this principle over a term of years presents great difficulty by reason of the numerous changes which occur in the type, grade and relative quantities of many of the items commonly used.

A full explanation of the methods adopted and an analysis of problems involved is contained in the Appendix to *Labour Report* No. 9.

For convenience the group of selected items is called a "regimen", and the quantities consumed per annum of each item used in the index are called "mass units" or "weights". These terms are used herein. In compiling the index the price of each item is multiplied by its quantity "weight", and then by its appropriate population or household "weight". The sum of these products for all items at any given date represents an "aggregate expenditure". The "aggregate expenditures" for successive periods are converted into an index by denoting the aggregate of a selected or "base" period as 1,000, and calculating all index-numbers to such base by the proportions which their aggregates bear to that of the base period. (*See also* § 6 (2) hereof.)

2. **Essential Features.**—Apart from clear thinking, common sense and sound arithmetic, the prime essentials in compiling a retail price index are—

- (a) that prices be accurately ascertained at regular intervals for goods of constant grade and quality;
- (b) that the regimen be as representative as possible of the field to be covered;
- (c) that the weights be in approximate proportion to quantities actually used in the selected field.

3. **The Regimen.**—The regimen must be a selected regimen because it is impossible in practice to ascertain at regular intervals prices of every item of goods and services entering into household expenditure. Even in normal times there is considerable difficulty in ensuring that the selected items are always a true sample. Some items which it would be desirable to include must be excluded because comparative prices cannot be accurately ascertained for them at different times and different places. It is deemed better to limit the regimen of the index to items for which price variations can be ascertained with reasonable accuracy than to distend the regimen by including items for which price comparisons are necessarily inaccurate. Similarly, many items of small aggregate or individual importance are excluded. The regimen of the index therefore is not (as is sometimes erroneously supposed) a basic wage regimen nor yet is it a full list of component items in a standard of living. It does not imply that any particular goods or any selected grades or quantities of these goods should enter into determination of a basic or living wage. In fact the regimen used for the "C" Series Index is simply a selected list of items combined in certain proportions for the purpose of measuring price variations. The items are representative of the fields covered, and the proportions approximate to those in average consumption so far as can be ascertained.

The regimen and "weights" used in the "C" Series Index are published in full in the annual *Labour Report*. The regimen at the moment comprises 160 commodities and services, consisting of 20 items of Groceries; 6 of Dairy Produce; 15 of Meat; 1 of Rent; 77 of Clothing and Footwear; and 41 of Miscellaneous Household Expenditure comprising Household Drapery (9), Household Utensils (20), Fuel and Light (4), Union and Lodge Dues, Medicine, Newspapers, Recreation, Smoking, Fares and School Requisites (8).

4. **Purpose of Retail Price Indexes.**—Retail price indexes are designed to measure the extent of changes in price levels only. While they may be used as indicating proportionate variations in cost of a *constant* standard of living, they do not measure the absolute cost of any standard of living, nor the cost of changes in the standard of living. In other words, they measure, as nearly as may be, the proportionate change in aggregate cost of specified quantities and qualities of the selected regimen of items included in the index. The regimen is representative of a high proportion of the expenditure of wage-earner households.

5. **Effects of War Conditions on Indexes.**—Under war-time conditions scarcity of certain types of goods, erratic supply and changes of grade due to standardization created unusual difficulty in obtaining the data necessary for measuring variations in prices. In some instances, this has rendered it necessary to substitute new grades,

qualities or types of articles for those formerly used as indicators of changes in price. This has been the case more particularly in the clothing, household drapery and household utensils sections of the regimen. Substitutions of similar kind were necessary at times under normal conditions in order to meet changes of fashion and usage. Such substitutions are not injurious to the index provided the transitional difficulties can be solved as they arise. No change in principle is involved. The index continues to measure as accurately as may be, price variations, and price variations only. Just as in the pre-war period, those differences in prices which are solely due to substitution of a new item for one which has ceased to be available or in common use are neutralized by taking the price of the old item as typical of price variation in its class up to the time of substitution, and the prices of the new item as typical of such changes in price thereafter.

In normal times, popular usage of items in general consumption changes slowly, and the weight of items and groups in the regimen is changed only at long intervals. In war-time, scarcity of supplies of some goods, rationing and kindred factors actually produce substantial changes in usage both long term and short term. The weights applicable to the items in the regimen, however, have not been changed and continue as in pre-war years. (*See* § 8 (3) hereof.)

During the war the "C" Series Index, as published, measured the aggregate variation in prices of the regimen of items adopted in peace times in peace-time proportion. This ensured comparability of the index on that specific basis. Its practical significance under war conditions was limited because a single index cannot take into account all changes that occur.

If it had been practicable, it would have been desirable to compile an additional index to measure variations over the war period, having regard to the fact that the relative consumptions of some items of the regimen have been altered by war conditions, and that the prices of some items not included in the regimen have moved differently from the variations recorded by the "C" Series Index. This would have provided an alternative method of comparison presenting another aspect of price movement in war-time.

§ 3. Various Series of Retail Price Index-Numbers.

Two main series of retail price index-numbers are compiled and shown in some detail in the following pages, viz. :—

- (i) the "B" Series Index relating only to food, groceries and housing, continuously available since 1907;
- (ii) the "C" Series Index relating to food, groceries, housing, clothing, household drapery and utensils, fuel and light, and other miscellaneous items of household expenditure, continuously available from 1914.

The "B" Series Index comprises only the food, groceries and housing sections of the "C" Series Index.

The "C" Series Index in total provides a reliable measure of aggregate variations in retail prices (as well as of group indexes for component sections) of a high percentage of goods and services used in wage-earner households. This index is compiled for—

- (a) the capital city of each of the six States,
- (b) four other principal towns in each of the six States,
- (c) weighted average of five towns (including capital city) in each of the six States,
- (d) weighted average for the six capital cities combined,
- (e) weighted average for the thirty towns (including capital cities),
- (f) separate indexes for Warwick, Port Augusta, Whyalla and Canberra.

The "C" Series Index forms the basis of the "Court" Series Index used by the Commonwealth Court of Conciliation and Arbitration for the "cost of living" adjustments of wages prescribed by awards made by the Court. (*See* § 9 of this Chapter.)

§ 4. Retail Price Levels ("C" Series Index) 1914-1948.

The aggregate indexes for November, 1914, 1921 and the years 1929, 1939 and 1943 to 1948 for the Thirty Towns are published in summary form on page 407 hereof, while the following table furnishes the relevant index-numbers for the Six Capital Cities as a whole for certain significant dates since November, 1914—the earliest date for which this index is available.

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX-NUMBERS.

WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

(Base: 1923-27 = 1,000.)

1914, November	..	..	687	(Beginning of War I.)
1918, November	..	..	905	(End of War I.)
1920, November	..	..	1,166	(Post-War peak)
1922, November	..	..	975	(Post-War trough)
1929, Year	..	..	1,033	(Pre-Depression peak)
1933, Year	..	..	804	(Depression trough)
1939, September Quarter	..	..	916	(Pre-War II.)
1943, March Quarter	..	..	1,123	(Pre-Price Stabilization)
1943, June Quarter	..	..	1,143	(War II. peak)
1945, September Quarter	..	..	1,126	(End of War II.)
1948, December Quarter	..	..	1,341	

The index reveals a rise of approximately 32 per cent. during the first world war, followed by a further rise of 29 per cent. in the two post-war years (November, 1918, to November, 1920). From November, 1920 to November, 1922, there was a fall of 16 per cent. and the index remained relatively stable until the onset of the depression in 1929. During the four years of the depression 1929 to 1933 the index fell by 22 per cent., rising thereafter steadily until 1939 when it was nearly 14 per cent. above the level of 1933, and approximately at the level it had occupied at the date of the Armistice of 1918. Between the outbreak of war (September, 1939) and March, 1943 (pre-price stabilization) the index rose by approximately 23 per cent. to a level slightly below that reached at the height of the post-war boom in 1920. Compared with the March Quarter, 1943, the index-number at the close of the war was practically unchanged. At December Quarter, 1948, the level was over 15 per cent. above that of the 1920 peak period.

Immediately after the outbreak of the war price control was established by the Government under Regulations dated 28th September, 1939, and a national policy of price stabilization was applied as from 12th April, 1943, backed by more stringent price control and price subsidies. The retail price level, as measured by the index, remained relatively steady throughout 1944 and 1945 at the level of March, 1943. This stabilized level was approximately 23 per cent. above that of 1939 and 63 per cent. above the level prevailing at the beginning of the first world war in 1914.

An account of price control measures and of price stabilization in Australia is published on page 414.

The movement in the various groups of the index and in the index as a whole for each year for which it has been compiled is shown in the following table for the six capital cities as a whole :—

ALL ITEMS (" C " SERIES) RETAIL PRICE INDEX AND ITS " GROUP " INDEX-NUMBERS(a) FOR THE SIX CAPITAL CITIES COMBINED, 1914 TO 1948.

(Base of Each Group : Weighted Average of Six Capital Cities, 1923-27 = 1,000)

Period.	Food and Groceries.	Rent (4 and 5 Rooms). (" B " Series).	Food, Groceries and Rent (4 and 5 Rooms). (" B " Series).	Clothing.	Miscellaneous.	All Items (" C " Series) Index.
1914 (e)	641	649	644	754	749	687
1915 (e)	842	659	777	792	786	782
1916 (e)	812	665	760	881	802	795
1917 (e)	836	685	782	992	882	847
1918 (e)	861	722	812	1,097	972	905
1919 (e)	1,026	768	934	1,238	1,036	1,022
1920 (e)	1,209	851	1,082	1,365	1,194	1,166
1921 (e)	950	877	924	1,246	1,010	1,013
1922 (e)	945	929	939	1,052	999	975
1923.. ..	1,009	950	988	1,045	999	1,003
1924.. ..	960	988	975	1,003	1,004	987
1925.. ..	998	1,008	1,002	991	992	997
1926.. ..	1,023	1,026	1,024	986	998	1,011
1927.. ..	1,000	1,030	1,011	975	1,008	1,002
1928.. ..	985	1,066	1,014	997	1,010	1,009
1929.. ..	1,044	1,073	1,054	996	1,007	1,033
1930.. ..	941	1,047	978	951	999	975
1931.. ..	826	901	852	853	973	873
1932.. ..	796	817	803	804	958	830
1933.. ..	751	804	768	787	950	804
1934.. ..	783	810	792	785	944	817
1935.. ..	806	839	818	783	946	832
1936.. ..	825	879	844	792	947	850
1937.. ..	851	912	872	811	960	873
1938.. ..	886	942	906	829	961	897
1939.. ..	927	965	939	841	962	920
1940.. ..	939	973	950	956	998	957
1941.. ..	947	976	956	1,118	1,060	1,008
1942.. ..	1,031	976	1,007	1,308	1,112	1,001
1943.. ..	1,037	975	1,011	1,440	1,160	1,131
1944.. ..	1,026	976	1,004	1,435	1,165	1,126
1945.. ..	1,034	975	1,009	1,425	1,161	1,126
1946.. ..	1,036	976	1,010	1,505	1,167	1,145
1947.. ..	1,100	977	1,050	1,566	1,199	1,188
1948.. ..	1,256	979	1,145	1,744	1,257	1,295
Quarter—						
1939—March ..	935	959	942	832	960	919
June ..	925	963	938	836	961	917
September ..	920	967	936	836	961	916
December ..	927	969	941	858	967	926
1944—March ..	1,020	976	1,000	1,434	1,166	1,124
June ..	1,026	976	1,004	1,429	1,165	1,125
September ..	1,036	975	1,010	1,433	1,164	1,129
December ..	1,022	975	1,002	1,442	1,163	1,126
1945—March ..	1,028	975	1,005	1,421	1,161	1,123
June ..	1,037	975	1,011	1,416	1,161	1,125
September ..	1,040	975	1,013	1,415	1,161	1,126
December ..	1,030	975	1,007	1,448	1,161	1,129
1946—March ..	1,036	976	1,010	1,456	1,164	1,134
June ..	1,042	976	1,014	1,494	1,167	1,145
September ..	1,029	976	1,006	1,521	1,167	1,146
December ..	1,037	976	1,011	1,550	1,170	1,156
1947—March ..	1,071	976	1,032	1,525	1,181	1,165
June ..	1,088	976	1,042	1,534	1,184	1,174
September ..	1,104	977	1,052	1,566	1,213	1,192
December ..	1,138	977	1,073	1,639	1,217	1,221
1948—March ..	1,190	978	1,105	1,661	1,231	1,248
June ..	1,229	979	1,129	1,720	1,248	1,278
September ..	1,274	979	1,156	1,778	1,271	1,311
December ..	1,330	980	1,190	1,818	1,277	1,341

(a) See footnote (a) on page 401.

(b) See footnote (b) on page 401.

(c) November.

§ 5. Increases in Retail Prices since Outbreak of War in 1939.

1. **Australia.**—The following statement shows for the Six State Capitals and Canberra separately and for the Six State Capitals as a whole, the percentage increases which have taken place in retail prices of items included in the "C" Series Index from September Quarter, 1939 to December Quarter, 1948, inclusive. The proportionate increase in the total index for each capital city is shown in the line marked "Total". The column headed "C" Series Index dissects the total percentage rise to show what part of it was due to the rise in prices in each of the four main groups of items. Thus, of the 45.7 per cent. increase for Sydney 15.3 was due to food and groceries, 0.2 to house rent, 23.4 to clothing and 6.8 to miscellaneous items. The column headed "Group Index" shows the percentage increase in prices of items in each group considered as a group. Thus for Sydney, prices in the food and groceries group increased by 42.6 per cent., house rents by 0.8 per cent., prices of clothing by 117.7 per cent. and prices of miscellaneous items by 36.2 per cent. These when weighted and combined in the proportions of the "C" Series Index showed a rise of 45.7 per cent. For the Six Capital Cities as a whole the increase over the period shown was 46.4 per cent.

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX.

PERCENTAGE INCREASES SEPTEMBER QUARTER, 1939 TO DECEMBER QUARTER, 1948.

Group.	Sydney.		Melbourne.		Brisbane.		Adelaide.	
	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.
Food and Groceries	15.3	42.6	16.6	45.4	17.6	49.7	16.6	47.0
House Rent ..	0.2	0.8	0.4	1.8	0.3	1.3	0.4	1.7
Clothing ..	23.4	117.7	23.4	118.8	24.9	117.9	23.2	110.1
Miscellaneous ..	6.8	36.2	6.1	30.7	6.3	30.8	6.8	32.4
Total ..	45.7	45.7	46.5	46.5	49.1	49.1	47.0	47.0

Group.	Perth.		Hobart.		Six State Capitals (a)		Canberra.	
	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.	"C" Series Index.	Group Index.
Food and Groceries	15.2	40.3	19.9	54.6	16.1	44.6	13.8	34.8
House Rent ..	0.2	1.0	0.3	1.2	0.3	1.3	0.2	0.6
Clothing ..	24.3	119.5	23.2	112.1	23.6	117.5	24.0	122.2
Miscellaneous ..	5.9	30.3	5.1	26.7	6.4	32.9	6.6	39.3
Total ..	45.6	45.6	48.5	48.5	46.4	46.4	44.6	44.6

(a) Weighted average Six State Capitals.

The foregoing comparisons refer to two points of time (i.e., the months immediately preceding the war and the closing months of 1948, at each of which special temporary factors may have influenced relative price levels. For instance, prices of certain foods (e.g., meat) fluctuate with seasonal conditions. The percentage increases shown do not, therefore, necessarily indicate the degree of increase due solely to causes peculiar to the war and post-war period.

2. **International Comparisons.**—The following table shows the increase during this period in Australia and certain other countries. The increases during the first world war have also been included.

RETAIL PRICE INDEX-NUMBERS.

(FOOD, RENT, CLOTHING, MISCELLANEOUS HOUSEHOLD EXPENDITURE.)

Date.	Australia.	United Kingdom.	Canada.	New Zealand.	Union of South Africa.	United States of America.
(A) : 1914-1919.						
1914 July	(a) 100	100	100	100	100(c)	100
1915 Year	114	125	97	108	103	102
1916 "	116	148	102	115	106	109
1917 "	123	180	130	125	114	128
1918 "	132	203	146	135	118	156
1919 "	149	208	155	145	126	175
(a) November.	(b) Food, Fuel, Light and Rent.	(c) Average for year 1914.				

(B) : 1939-1948.

1939—					(a)	
September Quarter ..	100	100	100	100	100	100
1940—Year (c) ..	105	119	105	104	104	100
1941— " (c) ..	110	128	111	108	109	105
1942— " (c) ..	119	129	116	111	118	116
1943— " (c) ..	124	128	117	114	126	123
1944— " (c) ..	123	129	118	(b) 114	130	125
1945— " (c) ..	123	131	119	114	133	127
1946— " (c) ..	125	131	123	115	135	138
1947—						
March Quarter	127	131	127	115	138	153
June " ..	128	131	132	117	141	156
September " ..	130	(d) 101	136	117	142	160
December " ..	133	103	143	123	142	164
Year	130	..	134	118	141	158
1948—						
March Quarter	136	105	149	125	144	167
June " ..	140	109	152	126	148	169
September " ..	143	108	157	125	151	173
December " ..	146	109	158	126	152	171
Year	141	108	154	126	149	170

(a) Food, Rent and Miscellaneous Expenditure.

Index (Base : December Quarter, 1942 = 100).

(d) New series (Base : 17th June, 1947 = 100).

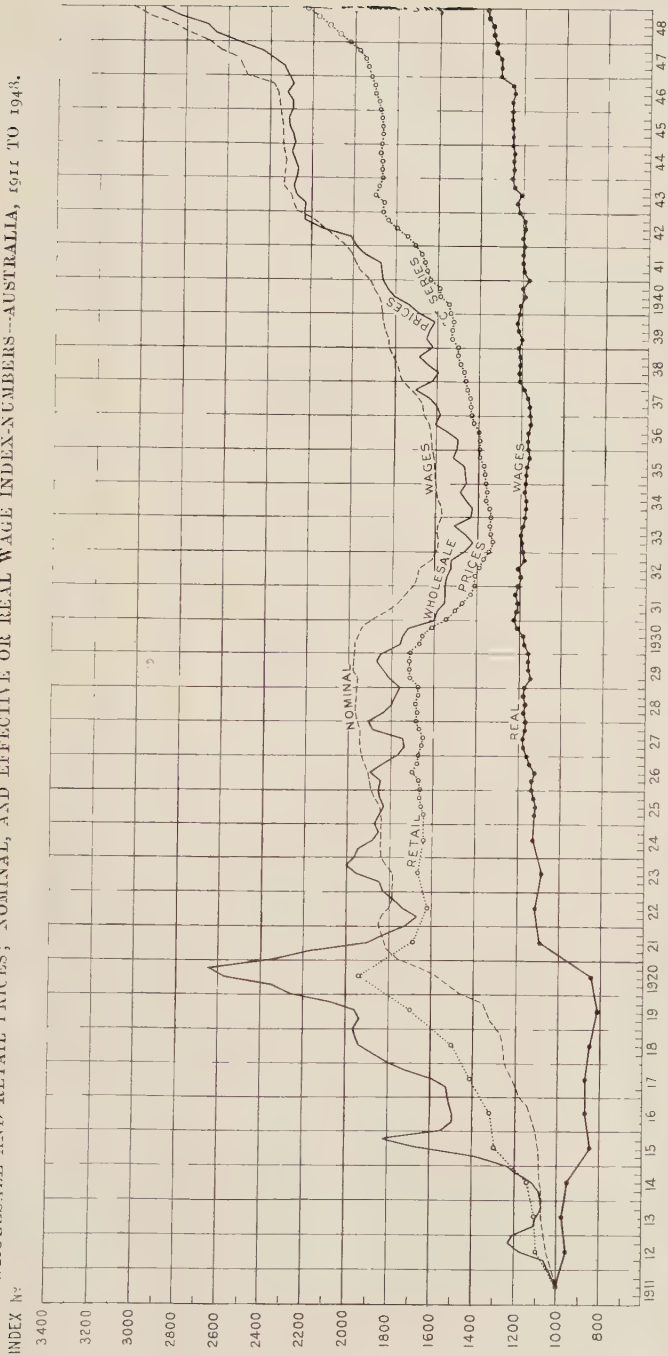
(b) Old Index as varied by new War-time

(c) Quarterly indexes appear in preceding issues.

At various stages during the first world war most of these countries introduced some measures of price control. But in the second world war they introduced price control measures at an early stage and these became more stringent as the war progressed, culminating in a policy of price stabilization.

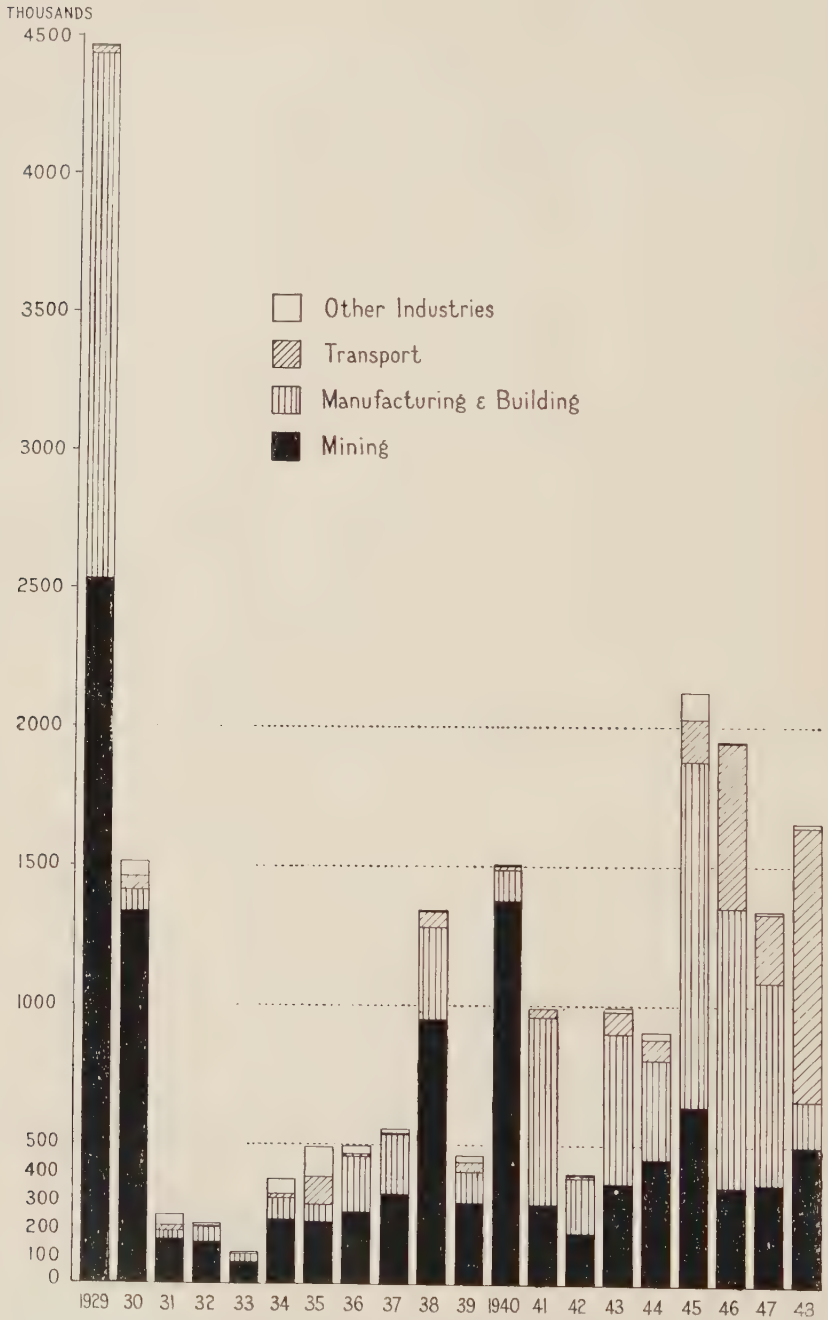
Immediately after the outbreak of war in September, 1939, the Commonwealth Government took steps to control prices, and, by proclamations issued from day to day, pegged prices of various commodities at those ruling on 31st August, 1939. The National Security (Prices) Regulations, proclaimed on 28th September, 1939, under the authority of the National Security Act, established the basic principles of war-time price control, provided for the appointment of a Commonwealth Prices Commissioner and conferred upon him extensive powers to control the price of goods declared for that purpose by the Minister for Trade and Customs. Further reference to this control appears on page 414.

WHOLESALE AND RETAIL PRICES; NOMINAL, AND EFFECTIVE OR REAL WAGE INDEX-NUMBERS--AUSTRALIA, 1911 TO 1943.



EXPLANATION.—The index-numbers in the graph above are for the Six Capital Cities as a whole, with the exception of those for Wholesale Prices up to the fourth quarter of 1927, which are for Melbourne. They are all calculated to the common base 1911 = 1,000, the scale for which appears on the left of the graph. The wholesale prices graph shows the trend of prices according to the "old" Melbourne Index up to the fourth quarter of 1927, but thereafter, this index having been "spliced" with the Basic Materials and Foodstuffs Index, the curve line moves in accordance with the variations of the latter. The price quotations for this index are, in the main, obtained from Melbourne sources, but their movements may be taken as representative of fluctuations in most Australian markets. Points in this graph are plotted quarterly from 1912 onward. The "A" Series Retail Price Index-numbers (food, groceries, rent of 4 and 5-roomed houses, clothing and miscellaneous household expenditure) are shown *quarterly* from 1925. For the period 1911-1914 the "C" Series index-numbers are taken back from the true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of All Houses). Nominal Wages are shown *quarterly* from 1914, and Real Wages *quarterly* from 1925. Real wages are computed on the basis of the "C" Series Retail Price Index.

INDUSTRIAL DISPUTES, AUSTRALIA, 1929 TO 1948—WORKING DAYS LOST.



EXPLANATION.—The scale refers to working days lost in thousands. Thus, taking the year 1929 and comparing the sections with the scale, it will be seen that about 2,528,000 working days were lost in Mining, 1,000,000 in Manufacturing and Building, 30,000 in Transport, and about 3,000 in Other Industries. Total, 4,461,000 days.

§ 6. Construction of All Items ("C" Series) Retail Price Index.

I. The Regimen.—The regimen from which the "C" Series Index is compiled consists of a list of commodities and services which commonly enter into the consumption of the average household, and in respect of which comparative prices can be ascertained with due precision from time to time and from place to place. (See § 2 (3 and 4) hereof). The regimen is divided into the following Groups and Sections :—

Group.	Section.
I. Food and Groceries ..	{ A.—Groceries. B.—Dairy Produce. C.—Meat.
II. Housing	{ D.—House Rent. E.—Clothing—Man. F.—Clothing—Woman.
III. Clothing	{ G.—Clothing—Boy (10½ years). H.—Clothing—Girl (7 years). J.—Clothing—Boy (3½ years).
IV. Miscellaneous ..	{ K.—Household Drapery. L.—Household Utensils. M.—Fuel and Light. N.—Other Miscellaneous.

The "C" Series Index includes the whole of the foregoing Groups, but for many purposes indexes are required for individual Groups or Sections. For this reason the following indexes are regularly compiled at the intervals shown, and published in various publications issued by the Bureau :—

Group.(a)	Content.	Frequency.
I.	Food and Groceries	Monthly
II.	Housing (4 and 5 roomed houses) (b) ..	Quarterly
I. and II.	Food, Groceries and Housing (4 and 5 rooms) ("B" Series)	Quarterly
III.	Clothing	Quarterly
IV.	Miscellaneous Household Requirements ..	Quarterly
I., II., III. and IV.	Food, Groceries, Housing (4 and 5 rooms), Clothing and Miscellaneous ("C" Series) ..	Quarterly

(a) "Group" or "Sectional" index-numbers in the various tables throughout this publication cannot be compared with each other in order to show the relative cost of Food and Groceries, Housing, Clothing or Miscellaneous requirements, since each "Group" or "Section" (or combination thereof) has its own Base = 1,000, viz., the weighted average cost for the Six Capital Cities as a whole during the five-yearly period 1923-27 for that "Group" or "Section". (b) Rent.—The rent index-numbers shown in the tables in this publication measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. They are "price" indexes in the strict sense, i.e., they are designed to measure only the "price" element in rent fluctuations. Similarly, "average rents" where shown are indexes of "price" changes in rentals expressed in terms of pence. They are not the average of rents actually paid by all tenants of 4 and 5-roomed houses. It would be inappropriate to include the average of rents actually paid in an index designed to measure price changes only. The average of rents actually paid is ascertained periodically by Census methods—see also pages 32 and 33 of Labour Report, No. 37.

For convenience of reference several of the indexes mentioned above have been given the "series" designation shown against them. These indexes are dealt with in turn in the following pages.

2. The Mass Units (or "Weights").—The "mass units" (or "weights") are multipliers representing the approximate average annual consumption *per head or per household* under normal conditions. The index-numbers are computed on a "total annual aggregate expenditure" basis, i.e., the total annual expenditure from time to time by a *standard population* in respect of the selected regimen of commodities and services commonly entering into household consumption, and of a constant *standard quality*. As a first step, therefore, it is necessary to multiply the price of each item by its "weight" per head or per household as the case may be. Thus, the "weight" of bread is 100 2-lb. loaves per head; of sugar 100 lb. per head; of towels 3 per household; and of housing 52 rent-weeks per household. The result of this initial calculation is designated the "P.M.U" aggregate (i.e., Prices x Mass Units).

The sum of these "P.M.U" results for each Section or Group is then multiplied by its appropriate population or household "weight" to produce their respective annual aggregate expenditures. Thus, Sections A to C (Food and Groceries) would be multiplied by the total population; Section D (Housing) by the total number of households; Sections E to J (Clothing) by the proportion of the total population applicable to each; and Sections K to N (Miscellaneous) by the total number of households.

The combination of the aggregates from the last paragraph gives the "total annual aggregate expenditure" for the whole regimen, from which the "C" Series index-number is derived by applying to 1,000 the ratio which the aggregate for any period bears to the aggregate for the base period of the Index. In the process of tabulation all prices are converted to pence for these final aggregates.

For tabulating purposes some of these "mass units" are varied when necessary to make up a deficiency or cancel out an excess in the aggregate resulting from a *change in the standard* of any item upon which prices are collected, to ensure that such changes shall not be wrongly recorded by the index as *variations* in prices. The published "mass units", however, still continue to show the correct *relative* consumption "weights" actually applicable to the commodities and services in the regimen for the *constant standards* used in the index. See also § 2 (3) and 6 (3) of this Chapter.

In the case of Food and Groceries (Group I.) the "weights" adopted are approximately the annual average consumption per head for household purposes of the various articles during the years 1927 to 1929. The "weights" allotted to items in Clothing (Group III.) and Household Drapery (Section K of Group IV.) are based largely on the results of the inquiries of the Royal Commission on the Basic Wage, which reported in 1920 and 1921. After exhaustive inquiries the Commission published a "regimen" for an average working family of five persons, and set out the constituent items in its "Indicator List". This list, so far as it related to the articles in question was followed substantially in the original compilation of the "C" Series Index, and has been adjusted by subsequent investigations of the Bureau to accord with changes in popular usage. The "weights" allotted to the items were not adjusted to take account of war-time shortages or rationing, and the index therefore measured war-time price changes in relation to a normal (or pre-war) apportionment of household expenditure. (See § 2 (5) and § 8 (3) hereof.)

3. Relative "Aggregate Expenditure" of Items and Groups.—In the *base period* of the index (the years 1923 to 1927) the relative importance of each of the four main groups expressed as a percentage of the weighted average "aggregate expenditure" in the Six Capital Cities (from which all relative index-numbers are derived) was—Food and Groceries, 38.66 per cent.; House Rent, 21.26 per cent.; Clothing, 23.04 per cent., and Miscellaneous, 17.04 per cent., as shown in the third column of the following table. Although the "weights" of each item in the regimen are kept virtually constant, the relative "aggregate expenditure" of the various items and groups will, of course, vary from time to time as relative prices change and, in

addition, the distribution of relative expenditure as between the groups and sections is varied from time to time for "relative weighting" purposes on the basis of the changing relativities of population and households as disclosed by successive Censuses. This, however, does not affect the level of the Index at the point of change, but alters the degree of variation registered by the various groups or sections of the Index.

The percentage distribution for Melbourne in the *base period* was practically identical with that of the Six Capital Cities as a whole, and has continued to be representative of the relative movement of prices in the capital cities up to the present time. For this and other reasons, therefore, the percentage distribution of the Melbourne "aggregate expenditure" for successive December quarters has been published in previous issues of this publication, and the figures for December Quarter, 1948 are shown in the fourth column of the table for comparison with those of the *base period* of 1923-27:—

Group.	Section.	Percentage of Aggregate Expenditure.			
		1923-27 (Base). Six Capital Cities.		Dec. Qtr., 1948. Melbourne.	
I. Food and Groceries	{ A Groceries	17.44	38.66	12.88	36.29
	{ B Dairy Produce ..	10.28		10.57	
	{ C Meat	10.94		12.84	
II. Housing	D House Rent— (4 and 5 roomed houses)	21.26	21.26	16.75	16.75
III. Clothing	{ E Man	8.69	23.04	10.64	29.43
	{ F Woman	9.12		14.25	
	{ G Boy, 10½ years ..	2.89		2.07	
	{ H Girl, 7 years ..	1.36		1.67	
	{ J Boy, 3½ years ..	0.98		0.80	
IV. Miscellaneous	{ K Household Drapery	1.09	17.04	1.97	17.53
	{ L Household Utensils	0.49		0.67	
	{ M Fuel and Light ..	4.92		4.57	
	{ N Other Miscellaneous	10.54		10.32	
		100.00		100.00	

It should be noted, however, that percentage price variations are measured from the "aggregate expenditures" of the *base period* of the index, and the percentages shown in the foregoing table for the *base period* 1923-27, therefore, are the proportionate "weights" applicable to the various groups and sections in measuring such variations in the index as a whole calculated to *this base period*, and *not* the percentage "weights" of any other period, for example, those shown for December quarter, 1948—which would only become of significance in the measurement of variations if the latter quarter were adopted as a *new base* for the index.

4. *Base Periods of the Indexes.*—The base period originally adopted by the Bureau for its retail price indexes was the year 1911. When the collection of the prices of clothing and miscellaneous items was undertaken for the purposes of the "C" Series Index, the month of November, 1914, was adopted as the base period for this series. The

desirability of computing retail price indexes to a post-war base was considered by a Conference of Statisticians in 1929, and it was resolved that from 1st January, 1930, the five years 1923-27 should be adopted as the base period, and since this date the retail price indexes have been published on this base. The aggregate to which all index-numbers are related is the weighted aggregate cost of the regimen in the six capital cities during the period taken as base, expressed as an index-number of 1,000.

§ 7. Tabular Statements of Retail Price Index-Numbers.

1. **General.**—The results of inquiries into price movements are available in the following publications :—

(i) *Monthly.*—A mimeographed statement is published each month giving index-numbers for Food and Groceries. The *Monthly Review of Business Statistics* contains annual, quarterly and monthly index-numbers to the latest available date.

(ii) *Quarterly.*—A mimeographed statement is issued about three weeks after the end of each quarter giving the "C" Series index-numbers for that quarter and immediately preceding quarters in respect of each of the 30 cities and towns originally adopted and for certain other towns, e.g., Canberra, for which the "C" Series index-numbers are now compiled. The *Quarterly Summary of Australian Statistics* contains annual, quarterly and monthly index-numbers to the latest available date. This publication also contains the average prices of the items comprising the Food and Groceries regimen, for each month of the last available quarter, in the 30 towns covered by the investigation. Comparative average rents of four and five-roomed houses in these towns are also shown therein.

(iii) *Annual.*—The *Labour Report* contains index-numbers over the past 28 years, quarterly results for the last eight years and monthly figures for the last year. The average prices for the last year of the items of food and groceries, and average house rents for the last six are also published in this report. This publication contains information similar to, but in less detail than, that published in the *Labour Report*.

2. **All Items ("C" Series) Retail Price Index.**—On page 300 is published a table of weighted averages for the six capital cities combined of "C" Series index-numbers, together with index-numbers for each of the four main groups of items in the "C" Series Index for each year 1914 to 1948 and quarterly for the years 1939 and 1944 to 1948.

In the pages immediately following are published :—

- (i) the "C" Series index-number for the last quarter of each year 1939 and 1943 to 1948 (page 405) and for the month of November of each of the years 1914 to 1920 (page 406), for each capital city and for the six capital cities combined, and showing also separate indexes for each of the four main groups of items; and
- (ii) the "C" Series index-numbers for November, 1914, 1921 and the years 1929, 1939 and 1943 to 1948 (page 407) for each of the 30 towns with the weighted averages for each State, the six capital cities and 30 towns, together with index-numbers for the same periods for four additional towns for which this index is tabulated.

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX-NUMBERS(a) : CAPITAL CITIES.

(Base of each Group : Weighted average of Six Capital Cities, 1923-27 = 1,000.)

Period.	Sydney.	Mel-bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (b)
GROUP I.—FOOD AND GROCERIES.							
Dec. Qtr. 1939 ..	940	942	859	888	926	941	927
" " 1943 ..	1,015	1,037	950	985	1,045	1,058	1,015
" " 1944 ..	1,022	1,046	959	988	1,049	1,039	1,022
" " 1945 ..	1,029	1,055	963	1,001	1,051	1,062	1,030
" " 1946 ..	1,047	1,044	996	996	1,052	1,084	1,037
" " 1947 ..	1,138	1,160	1,092	1,112	1,132	1,180	1,138
" " 1948 ..	1,326	1,355	1,280	1,305	1,324	1,416	1,330

GROUP II.—HOUSING (4 AND 5 ROOMED HOUSES).(c)							
Dec. Qtr. 1939 ..	1,040	960	855	891	882	930	969
" " 1943 ..	1,042	974	862	893	885	931	975
" " 1944 ..	1,043	973	863	892	886	933	975
" " 1945 ..	1,043	973	863	892	886	934	975
" " 1946 ..	1,043	973	863	895	886	936	976
" " 1947 ..	1,045	974	864	899	887	936	977
" " 1948 ..	1,047	974	866	905	890	938	980

GROUPS I. AND II.—FOOD, GROCERIES AND HOUSING ("B" SERIES) INDEX.							
Dec. Qtr. 1939 ..	977	947	855	887	907	935	941
" " 1943 ..	1,023	1,010	914	947	980	1,006	997
" " 1944 ..	1,027	1,015	919	948	983	995	1,002
" " 1945 ..	1,032	1,021	922	957	984	1,010	1,007
" " 1946 ..	1,043	1,014	942	955	985	1,024	1,011
" " 1947 ..	1,099	1,084	1,001	1,026	1,034	1,082	1,073
" " 1948 ..	1,214	1,203	1,116	1,146	1,152	1,226	1,190

GROUP III.—CLOTHING.							
Dec. Qtr. 1939 ..	854	862	865	869	840	867	858
" " 1943 ..	1,449	1,435	1,433	1,422	1,395	1,430	1,436
" " 1944 ..	1,441	1,404	1,430	1,416	1,412	1,424	1,442
" " 1945 ..	1,459	1,445	1,446	1,433	1,423	1,447	1,448
" " 1946 ..	1,555	1,551	1,552	1,529	1,548	1,558	1,550
" " 1947 ..	1,639	1,649	1,619	1,618	1,647	1,653	1,639
" " 1948 ..	1,831	1,801	1,817	1,809	1,835	1,807	1,818

GROUP IV.—MISCELLANEOUS.							
Dec. Qtr. 1939 ..	943	983	960	1,027	957	945	967
" " 1943 ..	1,179	1,157	1,140	1,212	1,140	1,109	1,168
" " 1944 ..	1,169	1,158	1,134	1,213	1,139	1,099	1,163
" " 1945 ..	1,163	1,158	1,133	1,213	1,139	1,099	1,161
" " 1946 ..	1,175	1,165	1,141	1,222	1,147	1,110	1,170
" " 1947 ..	1,245	1,201	1,157	1,266	1,160	1,140	1,217
" " 1948 ..	1,279	1,273	1,249	1,350	1,242	1,191	1,277

GROUPS I. TO IV.—ALL ITEMS ("C" SERIES) INDEX.							
Dec. Qtr. 1939 ..	943	932	874	906	899	919	926
" " 1943 ..	1,143	1,128	1,068	1,099	1,100	1,117	1,123
" " 1944 ..	1,142	1,138	1,069	1,098	1,104	1,106	1,126
" " 1945 ..	1,147	1,137	1,074	1,106	1,107	1,120	1,129
" " 1946 ..	1,177	1,157	1,110	1,128	1,136	1,155	1,156
" " 1947 ..	1,242	1,227	1,163	1,198	1,189	1,216	1,221
" " 1948 ..	1,359	1,345	1,291	1,327	1,316	1,344	1,341

(a) See footnote (a) on page 401.
page 401.

(b) Weighted average.

(c) See footnote (b) on

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX-NUMBERS(^a) : CAPITAL CITIES,
1914 to 1920.*(Base of each Group : Weighted Average of Six Capital Cities, 1923-27 = 1,000.)*

Period.	Sydney.	Mel- bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (^b)
GROUP I.—FOOD AND GROCERIES.							
Nov. 1914	638	616	614	683	746	687	641
" 1915	844	835	860	858	819	858	842
" 1916	833	791	748	835	854	807	812
" 1917	877	798	825	805	828	949	836
" 1918	877	843	882	862	816	918	861
" 1919	1,073	975	1,069	1,012	987	1,041	1,026
" 1920	1,225	1,220	1,117	1,225	1,113	1,293	1,209

GROUP II.—HOUSING (4 AND 5 ROOMED HOUSES). (^c)							
Nov. 1914	758	608	463	611	586	525	649
" 1915	780	611	472	574	581	571	659
" 1916	791	625	467	573	592	574	665
" 1917	797	657	492	606	602	586	685
" 1918	832	699	526	656	619	614	722
" 1919	866	744	604	707	650	746	768
" 1920	980	807	634	783	718	904	851

GROUPS I. AND II.—FOOD, GROCERIES AND HOUSING ("B" SERIES) INDEX.							
Nov. 1914	680	613	560	658	689	630	644
" 1915	825	756	722	758	734	756	777
" 1916	818	732	648	742	761	724	760
" 1917	848	748	707	734	748	820	782
" 1918	861	792	756	789	746	810	812
" 1919	1,000	893	904	904	867	936	934
" 1920	1,138	1,074	945	1,068	973	1,155	1,082

GROUP III.—CLOTHING.							
Nov. 1914	755	780	657	756	698	825	754
" 1915	805	797	690	821	760	833	792
" 1916	903	870	779	919	849	940	881
" 1917	1,009	976	899	1,049	980	1,041	992
" 1918	1,102	1,103	1,025	1,066	1,135	1,200	1,097
" 1919	1,237	1,213	1,192	1,303	1,277	1,344	1,238
" 1920	1,323	1,422	1,274	1,384	1,359	1,430	1,365

GROUP IV.—MISCELLANEOUS.							
Nov. 1914	766	728	728	770	780	699	749
" 1915	798	770	756	803	822	770	786
" 1916	808	784	766	832	869	780	802
" 1917	889	879	836	883	926	865	882
" 1918	988	950	931	988	1,035	945	972
" 1919	1,059	1,016	968	1,035	1,120	1,006	1,036
" 1920	1,209	1,181	1,130	1,200	1,262	1,124	1,194

GROUPS I. TO IV.—ALL ITEMS ("C" SERIES) INDEX.							
Nov. 1914	712	671	611	699	707	687	687
" 1915	816	768	721	780	755	776	782
" 1916	836	773	698	798	800	783	795
" 1917	892	823	773	832	832	879	847
" 1918	938	890	848	887	885	923	905
" 1919	1,065	988	981	1,018	1,005	1,042	1,022
" 1920	1,193	1,172	1,054	1,164	1,111	1,213	1,166

^(a) See footnote (a) on page 401.
for years 1921 to 1948.^(b) Weighted average. See page 396 for corresponding figures^(c) See footnote (b) on page 401.

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX-NUMBERS: THIRTY TOWNS.

(Base: Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

State and Town.	Nov. 1914.	Nov. 1921.	Year 1929.	Year 1939.	Year 1943.	Year 1944.	Year 1945.	Year 1946.	Year 1947.	Year 1948.
NEW SOUTH WALES—										
Sydney	712	1,046	1,073	936	1,151	1,144	1,142	1,165	1,212	1,318
Newcastle	1,041	1,028	901	1,109	1,094	1,100	1,119	1,167	1,279
Broken Hill	975	955	1,172	1,179	1,192	1,216	1,257	1,376
Goulburn	1,033	1,108	916	1,125	1,114	1,134	1,177	1,291
Bathurst	947	979	883	1,091	1,088	1,091	1,116	1,162
FIVE TOWNS (a)	1,042	1,067	933	1,147	1,140	1,139	1,162	1,208
VICTORIA—										
Melbourne	671	1,003	1,017	924	1,139	1,135	1,135	1,149	1,188	1,294
Ballarat	992	957	874	1,084	1,083	1,086	1,094	1,132
Bendigo	1,002	999	875	1,096	1,101	1,099	1,107	1,141
Geelong	1,019	980	911	1,110	1,112	1,113	1,124	1,170
Warrnambool	1,034	960	918	1,126	1,129	1,139	1,153	1,186
FIVE TOWNS (a)	1,003	1,011	920	1,135	1,131	1,131	1,145	1,184
QUEENSLAND—										
Brisbane	611	923	923	870	1,072	1,071	1,072	1,093	1,137	1,241
Toowoomba	949	915	858	1,080	1,085	1,087	1,107	1,152
Rockhampton	972	904	867	1,073	1,074	1,079	1,096	1,140
Townsville	1,025b	939b	918	1,114	1,117	1,114	1,136	1,181
Bundaberg	994c	931c	847	1,057	1,057	1,054	1,074	1,115
FIVE TOWNS (a)	941	922	871	1,075	1,075	1,075	1,097	1,140
SOUTH AUSTRALIA—										
Adelaide	699	989	1,037	906	1,102	1,098	1,102	1,120	1,165	1,277
Kadina, etc.	998	943	810	998	995	999	1,020	1,067
Port Pirie	1,025	980	896	1,087	1,081	1,085	1,106	1,152
Mount Gambier	1,029	963	872	1,061	1,064	1,070	1,093	1,134
Peterborough	948	1,043	897	1,087	1,087	1,093	1,108	1,152
FIVE TOWNS (a)	992	1,030	902	1,097	1,093	1,098	1,116	1,160
WESTERN AUSTRALIA—										
Perth, etc.	707	1,008	1,026	901	1,104	1,105	1,107	1,127	1,161	1,264
Kalgoorlie, etc.	1,048	1,032	1,066	1,112	1,109	1,102	1,123	1,165
Northam	1,030d	1,022	915	1,111	1,113	1,113	1,133	1,171
Bunbury	1,045	978	936	1,102	1,110	1,115	1,136	1,173
Geraldton	1,056	1,051	965	1,165	1,176	1,170	1,187	1,221
FIVE TOWNS (a)	1,020	1,026	915	1,112	1,113	1,116	1,136	1,170
TASMANIA—										
Hobart	687	1,070	1,000	908	1,117	1,105	1,107	1,138	1,178	1,292
Launceston	1,067	967	888	1,078	1,067	1,072	1,099	1,147
Burnie	1,003e	966	879	1,088	1,065	1,063	1,093	1,132
Devonport	904f	948	861	1,058	1,040	1,045	1,079	1,119
Queenstown	1,031	972	903	1,096	1,102	1,110	1,139	1,170
FIVE TOWNS (a)	1,057	986	898	1,101	1,089	1,092	1,121	1,164
THIRTY TOWNS (a)	1,013	1,026	917	1,127	1,122	1,123	1,142	1,185
SIX CAPITALS (a)	687	1,013	1,033	920	1,131	1,126	1,126	1,145
Warwick (Q.) (g)	994	931	834	1,055	1,061	1,064	1,087	1,138
Port Augusta (S.A.) (g)	1,035	1,061	883	1,076	1,076	1,084	1,105	1,157
Whyalla (S.A.) (g)	1,175
Canberra (A.C.T.) (g)	956	1,168	1,153	1,149	1,170	1,210	1,327

(a) Weighted average. (b) Charters Towers. (c) Warwick. (d) Midland Junction.
 (e) Zeehan. (f) Beaconsfield. (g) Not included in weighted averages above.

3. "B" Series Retail Price Index: Food, Groceries and Rent.—This index measures the prices of food and groceries and the rent of 4 and 5-roomed houses. It was first compiled for the year 1925, and retrospectively for several earlier years. It was designed to replace the "A" Series Index (food, groceries and rent of all houses), which was the original index compiled in 1912. The first of the two tables following is split up into the various sections of the regimen, and covers only the six capital cities,

while the second represents the whole regimen and covers the 30 Towns included in the tabulation of the "B" Series Index, with the weighted averages for the 5 towns in each State, the Six Capital Cities and the 30 Towns.

RETAIL PRICE INDEX-NUMBERS(a) : CAPITAL CITIES—"B" SERIES.

(Base of each Section : Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

Town.	1907.	1911.	1914.	1921.	1939.	1944.	1945.	1946.	1947.	1948.
SECTION A.—GROCERIES.										
Sydney	510	574	627	1,115	994	965	965	969	1,026	1,167
Melbourne ..	461	521	562	1,070	957	924	926	929	991	1,153
Brisbane ..	547	614	667	1,105	944	934	933	935	994	1,165
Adelaide ..	510	541	598	1,076	939	939	941	944	995	1,114
Perth	572	720	628	1,103	966	963	964	966	1,032	1,183
Hobart	501	566	604	1,087	947	925	930	934	991	1,143
Six Capitals (b) ..	499	564	599	1,093	969	946	946	950	1,008	1,161

SECTION B.—DAIRY PRODUCE.										
Sydney	551	574	656	1,080	851	960	958	956	977	1,165
Melbourne ..	571	567	635	1,087	885	970	966	965	998	1,189
Brisbane ..	495	581	588	983	793	932	932	930	955	1,115
Adelaide ..	548	651	705	1,018	800	895	895	893	928	1,136
Perth	709	733	735	1,152	870	982	983	981	1,000	1,166
Hobart	564	587	695	1,091	844	968	966	963	989	1,181
Six Capitals (b) ..	563	591	654	1,072	853	956	954	952	978	1,165

SECTION C.—MEAT.										
Sydney	519	501	668	960	935	1,158	1,190	1,202	1,343	1,456
Melbourne ..	557	485	663	1,030	968	1,279	1,307	1,288	1,365	1,502
Brisbane ..	535	468	610	897	822	1,026	1,032	1,079	1,223	1,343
Adelaide ..	553	541	784	1,095	929	1,151	1,178	1,188	1,288	1,423
Perth	780	824	881	1,103	958	1,239	1,251	1,248	1,290	1,411
Hobart	668	638	780	1,244	961	1,233	1,257	1,338	1,446	1,662
Six Capitals (b) ..	558	522	691	1,010	936	1,190	1,217	1,223	1,332	1,458

SECTIONS A, B AND C COMBINED.—FOOD AND GROCERIES.

Sydney	523	553	646	1,062	936	1,025	1,035	1,039	1,110	1,258
Melbourne ..	517	523	610	1,063	942	1,049	1,057	1,052	1,110	1,274
Brisbane ..	530	569	603	1,014	864	965	966	981	1,055	1,208
Adelaide ..	532	570	679	1,066	897	993	1,002	1,006	1,067	1,230
Perth	670	753	728	1,166	938	1,056	1,060	1,059	1,104	1,251
Hobart	565	592	678	1,133	923	1,035	1,043	1,069	1,132	1,316
Six Capitals (b) ..	533	559	640	1,064	927	1,026	1,034	1,036	1,100	1,256

SECTION D.—HOUSING (4 AND 5 ROOMED HOUSES).(c)

Sydney	593	701	760	989	1,035	1,043	1,043	1,043	1,044	1,047
Melbourne ..	455	569	628	820	955	974	973	973	974	974
Brisbane ..	283	373	466	630	854	863	863	863	864	866
Adelaide ..	510	706	655	809	888	862	862	864	867	903
Perth	458	524	589	739	881	886	886	886	887	889
Hobart	405	452	518	881	925	932	933	936	936	937
Six Capitals (b) ..	497	612	662	862	965	976	975	976	977	979

ALL SECTIONS COMBINED.—FOOD, GROCERIES AND HOUSING ("B" SERIES INDEX).

Sydney	548	606	687	1,036	972	1,030	1,036	1,038	1,082	1,173
Melbourne ..	495	539	616	977	945	1,017	1,022	1,010	1,054	1,154
Brisbane ..	442	500	554	877	858	923	924	932	978	1,072
Adelaide ..	524	618	671	975	891	951	957	960	998	1,100
Perth	594	672	679	982	914	987	990	989	1,017	1,107
Hobart	508	542	621	1,044	922	992	998	1,014	1,053	1,165
Six Capitals (b) ..	520	578	648	992	939	1,004	1,009	1,010	1,050	1,145

(a) See footnote (a) on page 401.

(b) Weighted average.

(c) See footnote (b) on page 401.

RETAIL PRICE INDEX-NUMBERS: THIRTY TOWNS—"B" SERIES.

FOOD, GROCERIES AND RENT.

(Base: Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

State and Town.	Nov. 1914.	Nov. 1921.	1929.	1939.	1943.	1944.	1945.	1946.	1947.	1948.
NEW SOUTH WALES—										
Sydney	680	977	1,115	972	1,040	1,030	1,036	1,038	1,082	1,173
Newcastle	944	1,068	934	1,000	987	989	990	1,035	1,129
Broken Hill	825	1,078	970	1,044	1,055	1,073	1,073	1,110	1,206
Goulburn	926	1,146	942	1,007	999	997	996	1,030	1,130
Bathurst	815	987	900	953	951	958	966	1,006	1,102
FIVE TOWNS (a)	965	1,110	969	1,036	1,026	1,032	1,034	1,078	1,169
VICTORIA—										
Melbourne	613	895	1,036	945	1,021	1,017	1,022	1,019	1,054	1,154
Ballarat	769	914	849	908	907	912	917	950	1,052
Bendigo	780	962	851	923	923	926	928	952	1,048
Geelong	844	985	917	962	958	957	961	1,012	1,116
Warrnambool	855	940	940	993	995	1,008	1,020	1,042	1,134
FIVE TOWNS (a)	876	1,026	938	1,012	1,009	1,013	1,011	1,046	1,146
QUEENSLAND—										
Brisbane	560	840	912	858	929	923	924	932	978	1,072
Toowoomba	771	855	830	927	945	949	955	1,001	1,087
Rockhampton	779	877	843	904	908	917	919	971	1,063
Townsville	820 ^b	975 ^b	920	970	975	979	989	1,036	1,125
Bundaberg	794 ^c	867 ^c	804	888	886	886	897	942	1,030
FIVE TOWNS (a)	824	906	858	928	926	928	936	982	1,074
SOUTH AUSTRALIA—										
Adelaide	658	898	1,030	891	958	951	957	960	998	1,100
Kadina, etc.	811	891	743	784	776	779	790	825	907
Port Pirie	839	963	882	932	923	931	933	971	1,063
Mount Gambier	770	866	838	877	884	895	903	931	1,022
Peterborough	844	1,042	890	926	922	935	936	973	1,067
FIVE TOWNS (a)	885	1,020	885	950	944	949	952	990	1,091
WESTERN AUSTRALIA—										
Perth, etc.	689	916	1,038	914	989	987	990	989	1,017	1,107
Kalgoorlie, etc.	928	1,010	1,178	1,122	1,121	1,128	1,136	1,174	1,266
Northam	898 ^d	1,072	936	1,001	999	1,001	1,003	1,034	1,131
Bunbury	907	996	979	1,010	1,015	1,024	1,024	1,056	1,148
Geraldton	942	1,090	990	1,069	1,079	1,072	1,073	1,103	1,193
FIVE TOWNS (a)	918	1,036	936	1,001	1,000	1,002	1,003	1,031	1,122
TASMANIA—										
Hobart	630	971	992	922	1,009	992	998	1,014	1,053	1,165
Launceston	858	937	887	953	936	943	956	1,001	1,113
Burnie	819 ^e	972	898	998	958	954	969	1,006	1,108
Devonport	696 ^f	930	865	942	920	924	939	976	1,078
Queenstown	871	920	933	1,005	1,004	1,014	1,028	1,067	1,173
FIVE TOWNS (a)	911	970	908	988	970	977	992	1,032	1,143
THIRTY TOWNS (a)	907	1,044	935	1,005	998	1,003	1,005	1,045	1,140
SIX CAPITALS (a)	924	1,054	939	1,011	1,004	1,009	1,010	1,050	1,145
Warwick (Q.) (g)	794	867	783	872	886	891	904	956	1,039
Port Augusta (S.A.) (g)	861	1,047	864	914	914	925	929	968	1,063
Whyalla (S.A.) (g)	1,013	1,103
Canberra (A.C.T.) (g)	1,026	1,073	1,058	1,059	1,062	1,101

(a) Weighted average. (b) Charters Towers. (c) Warwick. (d) Midland Junction.
 (e) Zeehan. (f) Beaconsfield. (g) Not included in weighted averages above.

§ 8. Changes in the Regimen.

1. General.—Since the original compilation of retail price indexes by the Bureau in 1912, the regimens of the several groups and sections have undergone some modifications. These are fully described in the annual *Labour Report* No. 37 for 1948, pp. 32-35. These changes are made from time to time with a view to improving the index-numbers as measures of price variations. They comprise chiefly the elimination or replacement of articles no longer in demand, or which experience had shown to be unsuitable media for the measurement of price variations; the alteration of units of quantity in certain cases to conform with those most in general use; the adjustment of the mass unit allotted to certain articles to bring them into accord with present-day consumption habits; the

re-adjustment of the population and household weights applicable to the several groups and sections of the regimen in accordance with general Census results; and improved methods of collecting and weighting average house rentals.

2. **Method of Effecting Changes.**—Changes of the nature mentioned are commonly made in price indexes without seriously impairing their continuity. In accordance with established principles of procedure in changing the regimen (see *Labour Report* No. 9, Appendix I., Part II., paragraphs 14 and 18), the general level of the index is taken as determined by the old regimen for the quarter in which the change is made, and the new regimen is used to measure variations in the price-level after that date. The linking up of the index-numbers on the old and the new basis is effected by the usual method of equating the respective weighted aggregate costs of the old and the new regimens in the six capital cities.

There are two methods of effecting this, as follows :—Up to June Quarter, 1942, all such changes were made by equating the new aggregate of the section embodying the changes to the former aggregate. This course was adopted when items were added to or omitted from the regimen, and when a change was made in the standard of any item. From September Quarter, 1942, however, all changes of standard were effected mainly by an appropriate adjustment of the “mass unit” or “weight” so as to preserve the percentage weight which the item carried in the aggregate from time to time and, wherever possible, the “weight” of any item dropped from the regimen was transferred to an article of a similar nature which would serve as a more appropriate medium for the measurement of the variations in the price of the article dropped than the remaining items of the section. The “mass units” of the remaining items under the former procedure were in effect proportionately increased to carry the aggregate of the item dropped, or reduced to admit a new item added. *See also* par. 2 on page 402.

While the foregoing involves no break of continuity in the index-numbers for the six capital cities as a whole, upon the basis of which all such changes are effected, slight alterations of the relative positions of individual towns are inevitable on account of the alteration of former standards. The effect, however, is more noticeable in the group index-numbers than in those covering a combination of groups, wherein the losses and gains tend to balance out.

3. **The Regimen under War Conditions.**—Although the effects of the war produced some variations from normal consumption in 1940 and 1941 it was not until 1942 (*See also* 2 (5) of this Chapter) that fundamental changes began to occur. As there explained, the years 1942, 1943 and 1944 produced temporary changes of a far-reaching character which, if permanent and stable, must have necessitated fundamental re-adjustments in the regimen and mass units of the index. But the resultant changes in the index would have been so extensive as virtually to create a new index which would not have been continuously comparable with the “C” Series Index either as compiled pre-war or as it may be compiled in post-war years. Consideration of the matter led to the conclusions—

- (i) that it was desirable to continue the “C” Series Index substantially on its pre-war regimen in order to ensure continuity of comparison of price movements on a clearly defined basis;
- (ii) that it was impossible to reconstruct the “C” Series Index to take account of recurrent temporary departures from normal consumption.

§ 9. Retail Price Indexes and Wage Variations.

Two distinct procedures are adopted by the Commonwealth Court of Conciliation and Arbitration in fixing and varying basic or living wages as follows :—

- (i) The Court periodically *fixes* the amount of wage in the light of evidence submitted by parties appearing before it. Such evidence usually covers a wide range of facts as to economic conditions.
- (ii) Having determined the amount of basic wage the Court further determines whether or not it shall be subject to automatic adjustment for changes in price level and, if so, by what method such *variation* shall be made. This again is decided in the light of evidence and of representations by the parties concerned.

The "C" Series Index is used by the Court to derive the "Court" series of retail price index-numbers upon which the basic or "needs" portion of the wages prescribed in awards is varied automatically for changes in price levels quarterly, half-yearly or yearly. These are commonly referred to as "cost of living adjustments" although in fact they relate only to that part of the *change in cost of living* which is due to variations in prices. The Court itself determines from time to time at public sittings the amount of the basic wage, having regard to evidence submitted in relation to other aspects of "cost of living" and other relevant considerations. In fixing the amount of the basic wage the Court does not have regard to either the regimen used in compiling the retail price index or the cost of such regimen. The regimen of the index would not be suited to such a purpose.

The considerations upon which the basic wage is fixed are set out in successive judgments of the Court and briefly summarized in Chapter III. (§ 3) of the *Labour Report*. On this matter, reference should be made to the Basic Wage Judgments of the Court, particularly those of 1934, 1937 and 1941, and to the general statement of principles set out in the judgment on the "Munition Workers' Case" of 1943. Certain State industrial tribunals use the index-numbers directly for automatic or quasi-automatic adjustments of the rates of wages determined by them as tribunals, while some State tribunals have regard to the index-numbers and other factors in considering what "cost of living" variations they should make in rates of wages.

The use of indexes by industrial authorities for purposes of adjusting rates of wages for changes in price level is a practice of long standing, dating in the case of the Commonwealth Court of Conciliation and Arbitration, for example, back to the year 1913. The tribunals form their own judgment as to relevance of the indexes to their purposes, and periodically hear the representatives of employers and employees on the issues involved, including questions as to whether the index is satisfactory for the purposes to which it is applied by the tribunal. In such proceedings the Statistician or his officers are called at times as witnesses on questions of fact and technical matters relating to the indexes.

The automatic adjustments in wages prescribed in awards of the Court on the basis of retail price index-numbers are sometimes referred to as "cost of living" adjustments and the index is popularly referred to as a "cost of living index". This at times creates misconceptions as to the nature of the retail price index since the term "cost of living" connotes not only change in cost of living due to changes in prices, but also changes in cost of living due to changes in standard of living. Beyond that, use of the term "cost of living" index sometimes creates the erroneous impression that the retail price index purports to embrace all that should be included in a desirable standard of living. As pointed out in the opening sections of this chapter, the "C" Series Index is a retail price index of specific meaning.

Reference should be made to *Labour Report* No. 37 for the actual Automatic Adjustment Scale used for the adjustment of the "needs" portion of the Commonwealth basic wage.

B.—WHOLESALE PRICES AND PRICE INDEXES.

§ 1. Melbourne Wholesale Price Index.

1. General.—The data on which this section is based relate almost entirely to wholesale prices in Melbourne.

The index of Melbourne wholesale prices was first computed in 1912, and has been continued on the same lines since that year. The items included comprise chiefly basic materials which in the form of raw material, food or as a source of power enter into production for home consumption. The purpose of the index, therefore, is to measure the changes in the prices of these particular materials rather than the changes in prices generally. As Australia does not, to any extent, manufacture from imported raw materials commodities for export, the local consumption appears to give the most appropriate weighting.

2. Index-Numbers.—Index-numbers for each group of commodities as well as for all groups combined are shown in the following table:—

MELBOURNE WHOLESALE PRICE INDEX-NUMBERS.

(Base of each Group : Year 1911 = 1,000.)

Year.	I. Metals and Coal.	II. Wool, Cotton, Leather, etc.	III. Agri- cultural Produce, etc.	IV. Dairy Produce.	V. Gro- ceries.	VI. Meat.	VII. Building Ma- terials.	VIII. Chemicals.	All Groups.
1861..	1,438	1,381	1,583	1,008	1,963	..	1,070	2,030	1,538
1871..	1,096	1,257	1,236	864	1,586	..	1,044	1,409	1,229
1881..	1,178	1,115	1,012	935	1,421	..	1,091	1,587	1,121
1891..	895	847	1,024	995	1,032	888	780	1,194	945
1901..	1,061	774	928	1,029	1,048	1,345	841	917	974
1911..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1921..	2,173	1,361	1,767	2,000	1,977	2,158	2,733	2,303	1,903
1922..	1,941	1,681	1,628	1,648	1,869	1,787	2,005	1,965	1,758
1923..	1,826	2,148	1,778	1,840	1,746	2,579	2,024	1,933	1,944
1924..	1,835	2,418	1,647	1,655	1,721	2,223	1,814	1,806	1,885
1925..	1,851	1,966	1,796	1,636	1,723	2,212	1,711	1,790	1,844
1926..	1,938	1,582	2,001	1,784	1,730	1,931	1,664	1,816	1,832
1927..	1,962	1,650	1,826	1,823	1,724	2,111	1,623	1,866	1,817
1928..	1,912	1,781	1,726	1,751	1,707	2,015	1,744	1,923	1,792
1929..	1,912	1,555	1,793	1,854	1,689	2,245	1,755	1,943	1,803
1930..	1,867	1,127	1,484	1,627	1,666	2,024	1,875	1,982	1,596
1931..	1,826	1,040	1,121	1,398	1,794	1,512	2,025	2,166	1,429
1932..	1,736	998	1,230	1,304	1,766	1,351	2,043	2,127	1,411
1933..	1,713	1,118	1,175	1,194	1,714	1,485	2,061	2,105	1,409
1934..	1,660	1,261	1,288	1,274	1,735	1,540	2,015	2,017	1,471
1935..	1,602	1,217	1,344	1,325	1,729	1,508	1,964	1,996	1,469
1936..	1,566	1,330	1,480	1,351	1,731	1,684	1,969	1,997	1,543
1937..	1,772	1,406	1,604	1,451	1,750	1,678	2,430	2,006	1,656
1938..	1,746	1,451	1,789	1,549	1,747	1,871	2,238	2,059	1,662
1939..	1,758	1,101	1,820	1,557	1,752	1,710	2,220	2,075	1,665
1940..	1,854	1,361	1,567	1,567	1,784	1,882	2,890	2,298	1,713
1941..	1,960	1,402	1,721	1,554	1,883	1,776	3,138	2,527	1,796
1942..	2,146	1,507	1,900	1,665	1,938	2,312	3,409	2,437	1,977
1943..	2,272	1,945	1,964	1,716	1,939	3,366	3,764	2,442	2,117
1944..	2,278	1,967	2,052	1,721	1,949	2,470	3,768	2,442	2,159
1945..	2,270	1,960	2,259	1,726	1,967	2,560	3,770	2,527	2,228
1946..	2,262	2,062	1,951	1,722	1,977	2,589	3,772	2,614	2,162
1947..	2,390	2,690	2,019	1,763	2,174	2,748	3,800	2,843	2,360
1948..	2,829	3,619	2,383	2,104	2,435	2,976	4,631	3,180	2,824

NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

§ 2. Basic Materials and Foodstuffs.

1. General.—As mentioned above, the Melbourne Wholesale Price Index was first computed in 1912. Neither the component items nor the weighting have been varied. Consequently the index is a measure of changes in wholesale price levels based on usages which have altered substantially since the period on which the weighting was determined. As such it is useful as an indication of long-term trends over the past 88 years which it covers, on the assumption that the relative importance of component items remained constant. But it no longer serves as a measure of price variations from month to month or from year to year of commodities weighted in accordance with present day consumption. Reference to the description of the index published in the annual *Labour Report* will indicate that animal fodder preponderate in the "Agricultural Produce" group, while "Building Materials" include little besides imported timber. In other groups, some principal items have increased in consumption while others have decreased. It was resolved, therefore, at the Conference of Statisticians at Brisbane in 1930 that the time had come to revise and extend the items included in order to bring the index into line with changed conditions. An investigation to that end was commenced, and in the course of the past few years, many new price-series have been collected on a monthly basis back to January, 1928. Some of these have been incorporated in a new index of the prices of basic materials and foodstuffs, index-numbers of which are currently published in the *Monthly Review of Business Statistics* and other publications of the Bureau. The

price quotations have in the main been obtained directly from manufacturers and merchants and, with a few important exceptions, from Melbourne sources. Apart from home-produced building materials, coal and one or two minor commodities, however, the price movements may be taken as representative of fluctuations in wholesale prices of basic materials in most Australian markets. The weighting system adopted is based on average annual consumption during the years 1928-29 to 1934-35 inclusive. The original index is being continued for the present on the old lines, as set out in § 1 on page 411.

2. *Index-Numbers.*—Index-numbers for each group of commodities and for all groups combined for this new index of wholesale prices of basic materials and foodstuffs are given in the following table.

WHOLESALE PRICE INDEX-NUMBERS : BASIC MATERIALS AND FOODSTUFFS.

(Base of each Group : Average 3 years ended June, 1939 = 1,000.)

Period.	Basic Materials.							Food-stuffs and Tobacco.	Basic Materials and Foodstuffs.		
	Metals and Coal.	Oils, Fats and Waxes.	Textiles.	Chemicals.	Rubber and Hides.	Building Materials.	Total.		Goods principally Imported. (a)	Goods principally Home Produced.	Total-All Groups.
1928-29	1,269	1,064	1,288	1,214	1,148	948	1,140	1,070	911	1,183	1,103
1929-30	1,259	1,115	991	1,157	866	940	1,073	1,099	940	1,179	1,108
1930-31	1,164	1,173	797	1,172	729	959	1,046	909	1,001	985	991
1931-32	1,081	1,134	765	1,195	738	951	1,011	857	996	922	946
1932-33	1,044	1,087	755	1,185	695	948	982	797	971	866	899
1933-34	1,025	845	1,020	1,113	801	939	917	843	890	893	895
1934-35	972	896	784	1,020	774	930	889	873	920	886	898
1935-36	920	952	997	991	879	930	900	917	945	918	926
1936-37	962	984	1,185	988	1,106	989	994	974	991	980	984
1937-38	1,013	1,012	1,000	1,001	969	1,041	1,014	997	1,018	1,000	1,005
1938-39	1,025	1,004	815	1,011	925	970	992	1,029	991	1,020	1,011
1939-40	1,051	1,152	1,038	1,068	1,163	1,084	1,090	1,012	1,106	1,025	1,047
1940-41	1,074	1,374	1,105	1,236	1,256	1,284	1,223	1,069	1,325	1,060	1,140
1941-42	1,173	1,509	1,184	1,372	1,350	1,352	1,329	1,169	1,525	1,123	1,242
1942-43	1,288	1,667	1,471	1,422	1,379	1,628	1,487	1,279	1,760	1,212	1,373
1943-44	1,310	1,695	1,501	1,432	1,398	1,743	1,527	1,287	1,823	1,217	1,396
1944-45	1,307	1,675	1,518	1,428	1,398	1,747	1,522	1,308	1,819	1,232	1,405
1945-46	1,302	1,561	1,518	1,416	1,398	1,766	1,490	1,348	1,782	1,257	1,412
1946-47	1,318	1,453	1,913	1,401	1,313	1,802	1,488	1,380	1,768	1,288	1,429
1947-48	1,460	1,607	2,833	1,478	1,261	1,893	1,955	1,532	1,924	1,448	1,588
1948-49	1,649	1,737	3,419	1,594	1,301	1,983	1,884	1,747	2,008	1,727	1,809
1947-48—											
July ..	1,353	1,519	2,129	1,412	1,149	1,851	1,534	1,438	1,831	1,336	1,482
Aug. ..	1,353	1,536	2,423	1,412	1,149	1,853	1,556	1,439	1,857	1,341	1,493
Sept. ..	1,358	1,578	2,515	1,424	1,216	1,853	1,579	1,452	1,890	1,351	1,500
Oct. ..	1,359	1,578	2,582	1,434	1,216	1,862	1,586	1,484	1,922	1,366	1,529
Nov. ..	1,392	1,578	2,806	1,434	1,296	1,900	1,621	1,514	1,947	1,402	1,502
Dec. ..	1,510	1,632	2,795	1,434	1,294	1,908	1,676	1,537	1,954	1,453	1,601
Jan. ..	1,513	1,616	3,027	1,529	1,307	1,914	1,696	1,567	1,928	1,500	1,626
Feb. ..	1,513	1,616	3,123	1,529	1,315	1,923	1,703	1,590	1,933	1,520	1,641
Mar. ..	1,514	1,654	2,901	1,529	1,266	1,918	1,704	1,590	1,950	1,514	1,642
Apr. ..	1,514	1,659	3,004	1,532	1,265	1,922	1,707	1,591	1,952	1,515	1,644
May ..	1,571	1,659	3,199	1,532	1,319	1,934	1,742	1,590	1,959	1,534	1,659
June ..	1,571	1,659	3,403	1,533	1,345	1,944	1,757	1,591	1,960	1,544	1,667
1948-49—											
July ..	1,651	1,724	3,323	1,533	1,361	1,948	1,800	1,614	2,000	1,573	1,699
Aug. ..	1,651	1,724	3,328	1,537	1,347	1,952	1,801	1,609	2,025	1,629	1,745
Sept. ..	1,697	1,733	3,371	1,538	1,347	1,964	1,823	1,680	2,017	1,639	1,750
Oct. ..	1,697	1,734	3,197	1,593	1,347	1,964	1,818	1,688	2,015	1,636	1,747
Nov. ..	1,876	1,734	3,484	1,592	1,349	1,966	1,895	1,735	2,008	1,724	1,807
Dec. ..	1,876	1,734	3,650	1,595	1,312	1,985	1,907	1,761	2,010	1,751	1,827
Jan. ..	1,936	1,741	3,639	1,623	1,275	1,986	1,929	1,765	2,011	1,769	1,840
Feb. ..	1,936	1,741	3,721	1,623	1,268	1,986	1,934	1,801	2,016	1,797	1,861
Mar. ..	1,965	1,741	3,721	1,623	1,250	2,002	1,945	1,798	2,000	1,809	1,865
Apr. ..	1,966	1,744	3,197	1,623	1,265	2,002	1,917	1,805	2,005	1,795	1,856
May ..	1,966	1,746	3,196	1,623	1,250	2,017	1,920	1,809	2,002	1,801	1,859
June ..	1,966	1,746	3,200	1,623	1,247	2,021	1,922	1,805	1,991	1,803	1,858

(a) Represents only such imported commodities as are included in the wholesale price index. This index does not measure changes in price of imports generally.

NOTE.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

C.—CONTROL OF PRICES DURING AND SINCE THE 1939-45 WAR.

1. **General.**—An account of the measures taken by the Commonwealth Government to control prices from September, 1939 (immediately after the outbreak of war), until 29th May, 1948 (the date of the Prices Referendum), is given in Official Year Book No. 37, pp. 458-464.

2. **Transfer of Price Control to the States.**—Consequent upon the rejection of the proposal embodied in the Prices Referendum held on 29th May, 1948, that permanent power to control rents and prices (including charges) be conferred on the Commonwealth Government, responsibility for price fixation was assumed by the State Governments and steps were taken to pass State Prices Acts. These acts were proclaimed to operate simultaneously on 20th September, 1948. Except in the case of Queensland, each Act was to remain in force for a specific period, but the period varied from State to State.

An amendment of the National Security (Prices) Regulations on 15th September, 1948, provided that the Minister may, by declaration published in the *Gazette*, declare that from and including a date specified prices for the sale of goods and rates for the supply of services in a State or Territory of the Commonwealth specified in the declaration would cease to be controlled under the Regulations. In pursuance of this power, the Minister for Trade and Customs issued declarations on 17th September, 1948, providing for the relinquishment of price control by the Commonwealth in the States as from 20th September, 1948.

On 20th September, 1948, each State Government issued declarations covering uniform lists of goods and services, which were brought under price control. Existing Commonwealth Prices Regulation Orders continued to apply to these goods and services until specially varied in accordance with the terms of the State legislation. At the same time, the Commonwealth Government issued an identical list of declared items to operate in the Australian Capital Territory and other Territories of the Commonwealth.

In the operation of State price control, the State Prices Commissioners closely collaborate. Conferences of Commissioners are held at intervals of approximately two months. The Commissioners are vested with certain powers of price control under the Prices Acts, and it is the usual procedure after the administrative conference for State Prices Ministers to meet to discuss matters of policy and any specific questions referred to them for determination. Thus a large degree of uniformity is attained in controlling and decontrolling items and in the fixation of margins and prices of major items.

3. **Expenditure on Price Stabilization Subsidies.**—The following is a comparison of the expenditure on Price Stabilization Subsidies for the years 1943-44 to 1948-49 inclusive. In addition to this expenditure, the Government paid subsidies to the dairy industry and on superphosphates and these payments also had a stabilizing influence on prices.

PRICES STABILIZATION SUBSIDIES: EXPENDITURE, AUSTRALIA.
(£'000.)

Item.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Potatoes	1,725	2,433	2,830	3,012	2,703	1,065
Tea	2,461	2,188	2,356	4,414	6,840	4,667
Milk	319	1,786	2,517	2,253	2,157	564
Recompent of Basic Wage	1,102	802	555	2,307	609	..
Imports (other than Tea) ..	967	2,437	3,007	3,691	8,539	7,605
Coal	101	183	457	959	2,352	232
Firewood	200	305	201	315	257	5
Rubber .. ..	..	99	141	333	..	..
Raw Wool .. ..	..	..	..	3,417	9,227	..
Tobacco .. ..	..	..	250	618	41	..
Other Expenditure ..	131	576	670	1,322	2,306	682
Total	7,006	10,809	12,984	22,641	35,031	14,820

D.—WAGES.

§ 1. Operations under Wages Board and Industrial Arbitration Acts.

1. *General*.—Particulars regarding operations under the Commonwealth and State Acts for the regulation of wages, hours and conditions of labour were first compiled for the year 1913, and reviews to the end of each annual period appear in the *Labour Reports* up to and including No. 36, in the *Quarterly Summaries of Australian Statistics* up to and including No. 196 and in previous issues of the Official Year Book (see No. 36, p. 465). Owing to the lack of comparability between States, which rendered the figures of doubtful value, and to difficulties encountered in the collection of these statistics they have been discontinued.

2. *Control of Wages During and Since the War*.—Reference may be made to *Labour Report* No. 35, page 55, for a summary of the steps taken during and since the war under the authority of the National Security (Economic Organization) Regulations to "peg" all rates of remuneration throughout all industry (both public and private) at those being paid on 10th February, 1942 and of the steps taken gradually to "unpeg" such wages by various amendments of the regulations mentioned.

§ 2. Rates of Wage and Hours of Labour.

1. *General*.—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by this Bureau in the early part of 1913. The particulars are obtained primarily from awards, determinations and agreements under Commonwealth and State Industrial Acts, and therefore are the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which are not carried on in the capital cities, e.g., mining, agriculture, etc., the rates in the more important centres are taken. In cases where no award, determination, or agreement is in force, particulars are taken of the ruling union or predominant rate. During recent years the number of predominant rates of wage included in the tabulations has been reduced considerably, as most of the industries and occupations are now covered by awards, determinations, or industrial agreements. The figures of nominal wages and hours are in course of revision to meet changes in industrial structure. The amounts should not be regarded as actual current averages, but as an index of changes expressed in money and hour terms.

The index-numbers for male adult workers are computed with the weighted average wage in 1911 as base (= 1,000). In the case of females, however, it has not been possible to secure information for the years prior to 1914, and the index-numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914 as base (= 1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given each year in the Appendix to the *Labour Report*.

2. *Weekly Rates of Wage, 1939, 1944 to 1948*.—(i) *General*. The average rate of wage for each industrial group is computed by taking the arithmetic average of the rates of wage payable for all classified occupations within that group. These averages are weighted in accordance with census results to give the average of all occupations for the States and for Australia.

(ii) *Adult Males—States.* The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the dates specified :—

WAGE RATES OF ADULT MALES.
WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL
WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES(a).

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included(b) ..	870	894	615	562	477	466	3,884
RATES OF WAGE.							
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
31st December, 1939 ..	96 7	93 6	97 5	88 11	100 6	89 5	95 3
" " 1944 ..	121 4	119 6	118 0	113 7	121 10	116 6	119 6
" " 1945 ..	121 10	120 4	119 10	114 5	122 9	116 11	120 4
" " 1946 ..	130 11	128 11	128 0	121 4	125 7	125 2	128 6
31st March, 1947 ..	131 0	129 4	129 10	123 3	130 2	125 11	129 6
30th June, 1947 ..	132 8	130 0	130 9	123 9	130 3	126 1	130 5
30th September, 1947 ..	137 7	133 9	133 6	130 9	134 3	129 11	134 10
31st December, 1947 ..	141 3	136 10	134 9	133 10	137 8	133 0	137 11
31st March, 1948 ..	145 2	143 3	139 0	137 7	140 8	139 7	142 6
30th June, 1948 ..	149 1	146 8	143 6	140 10	144 1	143 1	146 3
30th September, 1948 ..	155 5	151 1	148 4	150 4	150 10	150 3	152 3
31st December, 1948 ..	159 9	155 5	151 4	153 7	156 6	153 2	156 4

INDEX-NUMBERS.

(Base : Weighted Average Wage for Australia (518. 3d.), 1911 = 1,000.)

31st December, 1939 ..	1,885	1,825	1,800	1,775	1,602	1,745	1,858
" " 1944 ..	2,367	2,332	2,303	2,216	2,377	2,273	2,332
" " 1945 ..	2,377	2,347	2,339	2,233	2,395	2,282	2,348
" " 1946 ..	2,554	2,515	2,498	2,368	2,450	2,442	2,507
31st March, 1947 ..	2,556	2,524	2,533	2,405	2,540	2,458	2,527
30th June, 1947 ..	2,589	2,536	2,551	2,415	2,541	2,460	2,545
30th September, 1947 ..	2,685	2,610	2,604	2,552	2,620	2,535	2,630
31st December, 1947 ..	2,757	2,670	2,630	2,612	2,686	2,595	2,690
31st March, 1948 ..	2,832	2,795	2,713	2,685	2,744	2,724	2,781
30th June, 1948 ..	2,909	2,862	2,801	2,747	2,811	2,798	2,854
30th September, 1948 ..	3,033	2,948	2,894	2,934	2,943	2,932	2,970
31st December, 1948 ..	3,117	3,032	2,953	2,997	3,054	2,988	3,050

(a) The figures of nominal wages and hours of labour are in constant prices to meet changes in industrial structure. The amounts shown should not be regarded as actual current averages but as an index of changes expressed in money and hour terms.

(b) As at 31st December, 1948.

Except in South Australia in 1933, wages declined in all States during the four years 1930 to 1933, the average rates at 31st December of the latter year being approximately 17 per cent. less than those ruling at the end of 1930. Increases were granted in each of the States during the next six years, the weighted average nominal rate for Australia at 31st December, 1938 being 16 per cent. higher than at the end of 1933. During the early war years nominal weekly wages advanced annually in each State, the greatest increase occurring in 1942 (11 per cent. for Australia), followed by an increase of 3 per cent. in the following year, after which they remained comparatively stable until the fourth quarter of 1946 when they advanced 5.4 per cent. due mainly to the increase in the "needs" wage granted by the Commonwealth Court of Conciliation and Arbitration in its judgment of 13th December, 1946. With the relaxation of the Wage Pegging Regulations and the end of Price Stabilization wages rose rapidly during 1947 and 1948.

Male wages at 31st December, 1948, were 64.2 per cent. higher than in December, 1939, and 28.3 per cent. higher than in September, 1946.

At the close of 1948 rates were highest in New South Wales, followed in the order named by Western Australia, Victoria, South Australia, Tasmania and Queensland. The highest weighted average rate for Australia was recorded at 31st December, 1948, namely, 156s. 4d. per week.

(iii) *Adult Males—Industrial Groups.* The following table shows for Australia the average weekly rates of wage and index-numbers in each industrial group, and for all groups at the dates specified.

WAGE RATES OF ADULT MALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES FOR A FULL WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES IN EACH INDUSTRIAL GROUP(a).

NOTE.—Index-numbers for each industrial group and for all industrial groups are based on the average wage for all groups in 1911 (51s. 3d.) = 1,000. The index-numbers in this table are comparable throughout :—

Industrial Group.		Weighted Average Nominal Weekly Rate of Wage and Index-number at—							
		31st Dec., 1939.	31st Dec., 1945.	31st Dec., 1946.	31st Dec., 1947.	31st Mar., 1948.	30th June, 1948.	30th Sept., 1948.	31st Dec., 1948.
I. Wood, Furni- ture, etc.	{ Wage .. Index-No.	100/1 1,953	121/4 2,368	129/2 2,520	140/2 2,735	145/6 2,840	148/1 2,890	152/10 2,982	155/6 3,034
II. Engineering, etc.	{ Wage .. Index-No.	99/3 1,936	121/0 2,361	129/1 2,519	144/0 2,811	147/4 2,875	149/11 2,924	153/1 2,986	155/10 3,041
III. Food, Drink, etc.	{ Wage .. Index-No.	96/9 1,888	118/9 2,316	126/9 2,473	134/8 2,628	140/6 2,741	143/4 2,797	148/1 2,890	151/6 2,956
IV. Clothing, Tex- tiles, etc.	{ Wage .. Index-No.	93/2 1,817	118/11 2,321	126/11 2,476	132/8 2,589	138/11 2,710	147/5 2,876	148/9 2,902	153/7 2,997
V. Books, Printing, etc.	{ Wage .. Index-No.	114/3 2,229	134/9 2,630	148/2 2,891	158/7 3,094	160/8 3,135	168/6 3,287	170/6 3,327	177/2 3,457
VI. Other Manu- facturing	{ Wage .. Index-No.	95/8 1,867	119/3 2,326	128/1 2,499	136/8 2,667	143/6 2,800	146/3 2,854	150/6 2,937	153/11 3,003
VII. Building	{ Wage .. Index-No.	106/5 2,076	130/11 2,555	141/10 2,768	154/0 3,005	161/2 3,145	164/3 3,205	168/6 3,289	171/9 3,352
VIII. Mining, etc.	{ Wage .. Index-No.	109/1 2,142	127/2 2,482	134/6 2,624	148/4 2,895	152/0 2,966	154/7 3,017	159/4 3,109	163/5 3,189
IX. Railways, etc.	{ Wage .. Index-No.	96/6 1,884	122/9 2,396	130/10 2,553	142/3 2,775	144/11 2,828	148/5 2,896	153/1 2,986	156/1 3,045
X. Other Land Transport	{ Wage .. Index-No.	92/10 1,812	113/5 2,213	121/7 2,372	128/6 2,507	132/9 2,589	137/9 2,688	143/0 2,791	145/8 2,843
XI. Shipping, etc. (b)	{ Wage .. Index-No.	98/6 1,922	122/3 2,375	131/6 2,506	136/4 2,661	139/0 2,712	142/1 2,772	169/4 3,364	182/0 3,551
XII. Agricultural, etc. (c)	{ Wage .. Index-No.	84/0 1,639	121/0 2,376	129/0 2,517	136/5 2,662	139/8 2,725	146/9 2,864	153/8 2,999	158/1 3,085
XIII. Domestic, etc. (c)	{ Wage .. Index-No.	89/11 1,755	109/9 2,142	117/4 2,289	126/11 2,476	130/9 2,551	132/8 2,589	137/10 2,689	141/5 2,759
XIV. Miscellaneous	{ Wage .. Index-No.	92/10 1,811	114/7 2,230	122/6 2,399	130/10 2,553	135/9 2,650	138/9 2,707	144/4 2,810	148/3 2,893
All Industrial Groups	{ Wage .. Index-No.	95/3 1,858	120/4 2,348	128/6 2,507	137/11 2,690	142/6 2,781	146/3 2,854	152/3 2,970	156/4 3,050

(a) See note (a) on page 416. (b) Includes the value of victualling and accommodation where supplied. (c) Includes the value of board and lodging where supplied.

The foregoing table shows that the highest average weekly wage at 31st December, 1948 was recorded in Group XI. (Shipping, etc.), 182s. per week, followed by Groups V. (Books, Printing, etc.), 177s. 2d., VII. (Building), 171s. 9d., VIII. (Mining, etc.), 163s. 5d., XII. (Agricultural, etc.), 158s. 1d., IX. (Railways, etc.), 156s. 1d., and II. (Engineering, etc.), 155s. 10d. The lowest average rate was recorded in Group XIII. (Domestic, etc.), 141s. 5d. Compared with those prevailing at 31st December, 1947, rates of wage increased in all industrial groups during 1948.

(iv) *Adult Females—States.* The following table shows the weighted average nominal weekly rates of wage payable to adult female workers for a full week's work in each State and Australia at the dates specified.

WAGE RATES OF ADULT FEMALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES(a).

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included(b) ..	84	87	38	47	24	32	312

RATES OF WAGE.

	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
31st December, 1939 ..	51	3	51	9	55	2	49	7	55	8	50	8
" " 1944 ..	71	3	73	11	74	1	65	4	65	10	68	6
" " 1945 ..	72	7	75	7	74	10	67	2	67	6	71	3
" " 1946 ..	80	4	82	6	82	4	76	0	73	10	77	8
31st March, 1947 ..	80	6	83	2	83	5	77	1	77	1	78	7
30th June, 1947 ..	82	3	84	0	84	6	77	8	77	1	79	3
30th September, 1947 ..	82	9	86	6	84	8	79	8	78	0	79	7
31st December, 1947 ..	84	3	88	6	85	10	80	10	80	1	81	11
31st March, 1948 ..	87	7	92	1	87	2	81	6	80	8	83	1
30th June, 1948 ..	92	5	97	5	92	11	87	3	88	0	88	10
30th September, 1948 ..	95	1	99	0	95	4	91	3	89	10	92	5
31st December, 1948 ..	100	0	103	1	98	4	95	1	93	5	96	8

INDEX-NUMBERS.

(Base: *Weighted Average for Australia (27s. 2d.), 30th April, 1914 = 1,000.*)

31st December, 1939 ..	1,960	1,906	2,031	1,826	2,049	1,866	1,938
" " 1944 ..	2,622	2,722	2,726	2,406	2,422	2,520	2,647
" " 1945 ..	2,671	2,782	2,754	2,471	2,484	2,621	2,701
" " 1946 ..	2,056	3,035	3,031	2,797	2,718	2,860	2,972
31st March, 1947 ..	2,061	3,060	3,070	2,837	2,837	2,892	2,997
30th June, 1947 ..	3,020	3,093	3,110	2,859	2,837	2,916	3,040
30th September, 1947 ..	3,045	3,184	3,115	2,931	2,809	2,929	3,090
31st December, 1947 ..	3,102	3,256	3,160	2,976	2,947	3,014	3,152
31st March, 1948 ..	3,223	3,391	3,208	3,000	2,969	3,058	3,257
30th June, 1948 ..	3,402	3,587	3,421	3,213	3,266	3,268	3,455
30th September, 1948 ..	3,501	3,644	3,508	3,357	3,395	3,401	3,537
31st December, 1948 ..	3,681	3,795	3,618	3,499	3,438	3,559	3,694

(a) See note (a) to table on page 416.

(b) As at 31st December, 1948.

It should be noted that the base of these index-numbers is 1914 and not 1911 as in the foregoing tables for adult males. This is because there is no tabulation for adult female rates prior to 1914.

Female rates followed the same downward course as male rates from 1930 to 1933. The weekly average nominal wage for Australia fell from 54s. 1d. at 31st December, 1929, to 43s. 5d. at the same date in 1933, a decline of 10s. 8d., or 20 per cent. As with the rates for males, increases were recorded in all States during the next thirteen years, especially after September, 1946 when female rates were increased under the National Security (Female Minimum Wage) Regulations. The weighted average rate for Australia at 31st December, 1946, had advanced by 37s. 4d. per week over that ruling on 31st December, 1933. Female rates have risen rapidly since December, 1946, owing to increases in the male "needs" basic wage, in the percentage of that wage which the female rates represent and in marginal rates. The weighted average rate for Australia at 31st December, 1948 (100s. 4d.), was the highest recorded to that date and was 90.5 per cent. above the average at 31st December, 1939.

(v) *Adult Females—Industrial Groups.* The following table shows the weighted average weekly rates of wage payable in Australia to adult female workers in the industrial groups in which they are mainly employed, and in all groups combined.

WAGE RATES OF ADULT FEMALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES IN EACH INDUSTRIAL GROUP(a).

Date.	Industrial Group.					
	III. Food, Drink, etc.	IV. Clothing, Textiles, etc.	I, II, V, and VI. All Other Manufacturing.	XIII. Domestic, etc.(b)	XIV. Miscellaneous.	All Groups.
RATES OF WAGE.						
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1939..	48 9	50 9	51 11	54 5	56 8	52 8
" " 1944..	62 7	72 9	71 10	67 1	76 4	71 11
" " 1945..	67 7	75 3	72 0	67 5	76 4	73 5
" " 1946..	74 9	84 7	79 5	72 9	81 0	80 9
31st March, 1947 ..	77 5	84 11	79 9	73 9	81 10	81 5
30th June, 1947 ..	78 4	85 11	83 6	75 1	82 5	82 7
30th September, 1947	81 9	86 2	86 11	75 7	86 0	84 0
31st December, 1947..	83 3	87 7	90 2	76 7	88 5	85 8
31st March, 1948 ..	89 0	88 2	92 0	80 2	95 8	88 6
30th June, 1948 ..	91 0	96 3	96 0	82 7	98 6	93 10
30th September, 1948	93 8	96 10	99 11	86 10	102 3	96 1
31st December, 1948..	95 10	101 7	103 3	89 3	107 9	100 4

INDEX-NUMBERS.

(Base : Weighted Average for Australia (27s. 2d.), 30th April, 1914 = 1,000.)

31st December, 1939..	1,795	1,869	1,910	2,003	2,085	1,938
" " 1944..	2,304	2,678	2,643	2,470	2,809	2,647
" " 1945..	2,486	2,768	2,651	2,481	2,809	2,701
" " 1946..	2,751	3,113	2,922	2,678	2,980	2,972
31st March, 1947 ..	2,851	3,126	2,936	2,713	3,012	2,997
30th June, 1947 ..	2,883	3,161	3,075	2,764	3,033	3,040
30th September, 1947	3,007	3,170	3,199	2,783	3,165	3,090
31st December, 1947..	3,064	3,222	3,317	2,820	3,253	3,152
31st March, 1948 ..	3,275	3,244	3,385	2,952	3,522	3,257
30th June, 1948 ..	3,348	3,544	3,533	3,040	3,624	3,455
30th September, 1948	3,448	3,563	3,678	3,197	3,762	3,537
31st December, 1948..	3,526	3,739	3,802	3,284	3,967	3,694

(a) See note (a) to table on page 416.

(b) Includes the value of board and lodging, where supplied.

During 1948 the rate of wage for female employees in each industrial group increased as follows :—III. (Food, etc.), 12s. 7d. per week ; XIII. (Domestic, etc.), 12s. 8d. per week ; I, II, V. and VI. (All other manufacturing), 13s. 1d. per week ; IV. (Clothing, etc.), 14s. per week and XIV. (Miscellaneous), 19s. 4d. per week. The weighted average for all groups increased by 14s. 8d. per week.

3. *Relative Hours of Labour and Hourly Rates of Wage, 1939 to 1948.*—(i) *General.* The rates of wage referred to in preceding paragraphs are the minima payable for a full week's work. The number of hours constituting a full week's work differs, however, in many instances between various trades and occupations in each State, and between the same trades and occupations in the several States. To secure what may be for some purposes a better comparison, the results in the preceding paragraphs are reduced to a common basis, namely, the rate of wage per hour. Particulars as at the end of the years 1944 to 1948 compared with 1939 are given in the following table, for males and females separately in each State. These particulars relate to (a) the weighted average

nominal weekly wage; (b) the weighted average number of working hours constituting a full week's work; and (c) the weighted average hourly wage. The weighted average weekly wage relates to all industrial groups combined and includes the value of board and lodging where supplied in land occupations, and the value of victualling and accommodation where supplied in marine occupations, whereas the number of working hours and the hourly wage relate to all industrial groups other than Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.). Some of the occupations included in these groups are of a casual or seasonal nature, and the hours of labour are not generally regulated either by awards or determinations of industrial tribunals or otherwise, hence the necessary definite particulars for the computation of the average number of working hours are not available.

The general effect of reducing the rates of wages to a common basis (i.e., per hour) is to eliminate any difference between the several States which may be due to unequal working time.

(ii) *Adult Males and Females.* Particulars of the weekly and hourly wages and hours of labour for adult males and females at the close of the years 1944 to 1948 compared with 1939 are given in the table hereunder:—

WEEKLY AND HOURLY WAGES AND HOURS OF LABOUR: ADULT WORKERS.(a)

31st December—		Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
MALE WORKERS.									
1939..	..	Weekly Wage (b)	96/7	93/6	97/5	88/11	100/6	89/5	95/3
		Working Hours (c)	43.92	44.61	43.46	45.83	44.33	45.33	44.29
		Hourly Wage (c)	2/3½	2/1½	2/3½	1/11½	2/4	2/0	2/2½
1944..	..	Weekly Wage (b)	121/4	119/6	118/0	113/7	121/10	116/6	119/6
		Working Hours (c)	43.50	43.91	43.18	44.21	43.15	43.39	43.61
		Hourly Wage (c)	2/9½	2/8½	2/8½	2/6½	2/10	2/7½	2/8½
1945..	..	Weekly Wage (b)	121/10	120/4	119/10	114/5	122/9	116/11	120/4
		Working Hours (c)	43.50	43.91	43.18	44.07	43.15	43.38	43.59
		Hourly Wage (c)	2/9½	2/9	2/8½	2/6½	2/10½	2/7½	2/9
1946..	..	Weekly Wage (b)	130/11	128/11	128/0	121/4	125/7	125/2	128/6
		Working Hours (c)	43.50	43.82	43.18	44.07	43.15	43.38	43.57
		Hourly Wage (c)	3/0½	2/11½	2/11	2/8½	2/10½	2/9½	2/11½
1947..	..	Weekly Wage (b)	141/3	136/10	134/9	133/10	137/8	133/0	137/11
		Working Hours (c)	41.11	43.08	43.18	42.84	43.15	41.27	42.51
		Hourly Wage (c)	3/5½	3/1½	3/0½	3/1½	3/1½	3/1	3/3
1948..	..	Weekly Wage (b)	159/9	155/5	151/4	153/7	156/6	153/2	156/4
		Working Hours (c)	40.00	40.00	40.00	40.00	40.00	40.00	40.00
		Hourly Wage (c)	3/11½	3/10½	3/8½	3/9½	3/11	3/9½	3/10½
FEMALE WORKERS.									
1939..	..	Weekly Wage	53/3	51/9	55/2	49/7	55/8	50/8	52/8
		Working Hours	43.88	44.42	44.01	45.00	45.33	45.10	44.36
		Hourly Wage	1/2½	1/2	1/3	1/1	1/2½	1/1½	1/2½
1944..	..	Weekly Wage	71/3	73/11	74/1	65/4	65/10	68/6	71/11
		Working Hours	43.88	44.10	44.00	43.00	44.00	44.00	44.03
		Hourly Wage	1/7½	1/8	1/8½	1/5½	1/6	1/6½	1/7½
1945..	..	Weekly Wage	72/7	75/7	74/10	67/2	67/6	71/3	73/5
		Working Hours	43.88	44.10	44.00	43.00	44.00	44.00	44.03
		Hourly Wage	1/7½	1/8½	1/8½	1/6½	1/6½	1/7½	1/8
1946..	..	Weekly Wage	80/4	82/6	82/4	76/0	73/10	77/8	80/0
		Working Hours	43.88	44.10	44.00	43.00	44.00	44.00	44.03
		Hourly Wage	1/10	1/10½	1/10½	1/8½	1/8½	1/9½	1/10
1947..	..	Weekly Wage	84/3	88/6	85/10	80/10	80/1	81/11	85/8
		Working Hours	41.78	43.99	44.00	42.19	44.00	44.00	43.08
		Hourly Wage	2/0½	2/0½	1/11½	1/11	1/9½	1/10½	1/11½
1948..	..	Weekly Wage	100/0	103/1	98/4	95/1	93/5	96/8	100/4
		Working Hours	40.00	40.00	40.00	40.00	40.00	40.00	40.00
		Hourly Wage	2/6	2/7	2/5½	2/4½	2/4	2/5	2/6

(a) See note (a) to table on page 416. (b) Weighted average weekly rate in all industrial groups combined. (c) Weighted average working hours per week, and computed hourly rates of wage for all industrial groups excepting Groups XI. (Shipping, etc.), and XII. (Agricultural, Pastoral, etc.). Working hours in these groups are generally regulated by industrial tribunals for some of the occupations classified in industrial groups XI and XII.

(iii) *Index-numbers.* The downward tendency in hours of labour for Australia commenced in the December quarter of 1924, when the weighted averages were 46.66 for males and 46.02 for females, and, excepting for slight increases in 1929 and 1930, the reduction has continued. During the second half of 1947 hours for males and females in New South Wales were reduced owing to the introduction of the forty-hour week in occupations under the jurisdiction of State arbitration. A substantial reduction also occurred in South Australia, while slight reductions took place in Victoria and Tasmania. In Australia generally, the forty-hour week operated from 1st January, 1948 and was responsible for substantial reductions in hours in that year. The weighted averages for Australia at 31st December, 1948 were 39.96 hours for males and 40.00 hours for females. The effect of changes in hours of labour on the hourly rate of wage as compared with the general increase in the weekly wage is readily seen from the comparative index-numbers for all classes combined given in the following table. It should be noted that these comparative index-numbers for males and females are on the 1914 base as against the 1911 base of the earlier tables for adult males. This is because there is no tabulation for adult female rates prior to 1914 :—

WEEKLY AND HOURLY INDEX-NUMBERS OF WAGE RATES: ADULT WORKERS.(a)

(Base: Weighted Average for Australia, 30th April, 1914* = 1,000.)

31st December—	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
MALE WORKERS.								
1939..	{ Weekly Wage ..	1,753	1,697	1,767	1,613	1,824	1,623	1,728
	{ Hourly Wage (b) ..	1,963	1,834	1,979	1,692	2,001	1,717	1,903
1944..	{ Weekly Wage ..	2,201	2,168	2,141	2,061	2,210	2,113	2,168
	{ Hourly Wage (b) ..	2,405	2,343	2,329	2,173	2,443	2,254	2,355
1945..	{ Weekly Wage ..	2,210	2,183	2,175	2,076	2,227	2,121	2,184
	{ Hourly Wage (b) ..	2,408	2,355	2,347	2,192	2,446	2,255	2,365
1946..	{ Weekly Wage ..	2,374	2,338	2,323	2,202	2,278	2,271	2,331
	{ Hourly Wage (b) ..	2,593	2,533	2,509	2,339	2,491	2,423	2,529
1947..	{ Weekly Wage ..	2,563	2,483	2,445	2,428	2,497	2,413	2,501
	{ Hourly Wage (b) ..	2,974	2,709	2,638	2,692	2,754	2,648	2,797
1948..	{ Weekly Wage ..	2,899	2,819	2,746	2,787	2,840	2,779	2,836
	{ Hourly Wage (b) ..	3,399	3,322	3,180	3,246	3,364	3,254	3,327
FEMALE WORKERS.								
1939..	{ Weekly Wage ..	1,960	1,906	2,031	1,826	2,049	1,866	1,938
	{ Hourly Wage ..	2,193	2,107	2,267	1,952	2,217	2,032	2,145
1944..	{ Weekly Wage ..	2,622	2,722	2,726	2,406	2,422	2,520	2,647
	{ Hourly Wage ..	2,934	3,024	3,042	2,685	2,703	2,813	2,952
1945..	{ Weekly Wage ..	2,671	2,782	2,754	2,471	2,484	2,621	2,701
	{ Hourly Wage ..	2,989	3,090	3,074	2,758	2,773	2,925	3,012
1946..	{ Weekly Wage ..	2,956	3,035	3,031	2,797	2,718	2,860	2,972
	{ Hourly Wage ..	3,307	3,373	3,383	3,122	3,033	3,191	3,315
1947..	{ Weekly Wage ..	3,102	3,256	3,160	2,976	2,947	3,014	3,152
	{ Hourly Wage ..	3,646	3,634	3,527	3,464	3,289	3,363	3,593
1948..	{ Weekly Wage ..	3,681	3,795	3,618	3,499	3,438	3,559	3,694
	{ Hourly Wage ..	4,518	4,658	4,441	4,295	4,220	4,369	4,535

(a) See note (a) to table on page 416.

(b) See also footnote to following table.

* Approximate Weekly Rates—M = 55/1; F = 27/2. Hourly Rates—M = 1/2; F = 0/6½.

4. Weighted Average Nominal Weekly Hours of Labour, Adult Males. - The following table shows the weighted average nominal hours of labour (excluding overtime) in a full working week for adult male workers in each State and Australia at 31st December, 1944 to 1948 compared with 1939.

HOURS OF LABOUR.

INDEX-NUMBERS OF WEEKLY HOURS OF LABOUR OF ADULT MALES.

NOTE.—Index-numbers are based on the average hours of labour for Australia at 30th April, 1914 (48.93) = 1,000. Overtime is excluded.

31st December—	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
1939..	{ Weighted average weekly hours of labour (a) ..	43.92	44.61	43.46	45.83	44.33	45.33	44.29
	{ Index-numbers ..	898	912	888	937	906	926	905
1944..	{ Weighted average weekly hours of labour (a) ..	43.50	43.91	43.18	44.21	43.15	43.39	43.61
	{ Index-numbers ..	889	897	882	904	882	887	891
1945..	{ Weighted average weekly hours of labour (a) ..	43.50	43.91	43.18	44.07	43.15	43.38	43.59
	{ Index-numbers ..	889	897	882	901	882	887	891
1946..	{ Weighted average weekly hours of labour (a) ..	43.50	43.82	43.18	44.07	43.15	43.38	43.57
	{ Index-numbers ..	889	896	882	901	882	887	890
1947..	{ Weighted average weekly hours of labour (a) ..	41.11	43.68	43.18	42.84	43.15	43.27	42.51
	{ Index-numbers ..	840	893	882	876	882	884	869
1948..	{ Weighted average weekly hours of labour (a) ..	40.00	39.99	40.00	40.00	39.57	40.00	39.96
	{ Index-numbers ..	817	817	817	817	809	817	817

(a) Weighted average working hours per week for all industrial groups excepting Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.). Working hours have not been generally regulated by industrial tribunals for some of the occupations classified in Industrial Groups XI. and XII. See note (a) to table on page 416.

5. **Nominal and Effective Wages.**—(i) *General.* Wages are said to be *nominal* when they represent the actual amounts of money received in return for labour, and are described as *effective* or *real* when expressed in terms of their equivalent purchasing power, that is, their purchasing power over some definite composite unit or regimen the cost of which can be ascertained at different times. The relation between *nominal* and *effective* or *real* wages was discussed at some length in *Labour Report* No. 6, and was also referred to in *Labour Report* No. 11.

Since it is possible to measure purchasing power over more than one composite unit or regimen it is equally possible to convert any given nominal wage series into more than one series of effective or real wages. Prior to 1936 it was the practice of this Bureau to compute effective wage index-numbers by dividing the nominal wage index-numbers by the corresponding retail price index-numbers for food, groceries and rent of all houses ("A" series). While wage rates were generally varied on the basis of the "A" series index-numbers there was a good deal to be said for this procedure. When the Commonwealth Court abandoned the "A" series, the merits of the "C" series for "deflating" nominal wage rates were strengthened. The "C" series covers food, groceries, rent of four and five-roomed houses, clothing and miscellaneous household requirements. As the computation of the "A" series was discontinued after the June Quarter of 1938, tables measuring real wages in terms of their purchasing power over the "A" series regimen have been discontinued, and in the following tables real wages are measured in terms of their purchasing power over the "C" series only.

(ii) *Nominal Weekly Wage Index-numbers, Adult Males, 1901 to 1948—States.* The following table shows for the period 1901 to 1948 the weighted average nominal weekly rates of wage payable for adult males in each State, the weighted average rate for Australia in 1911 being taken as the base (= 1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates are necessarily taken for places other than the capital cities. The index-numbers for 1901 and 1911 are based on rates current at the end of December, annual averages

not being available. For 1914 and subsequent years, however, the index-numbers are based on the average rates current at the end of the four quarters of each year:—

NOMINAL WAGE INDEX-NUMBERS: ADULT MALES.

(Base: Weighted Average Wage for Australia, 1911 = 1,000.)

State.	1901.	1911.	1914.	1921.	1929.	1933.	1939.	1944.	1945.	1946.	1947.	1948.
New South Wales	858	1,003	1,093	1,862	2,012	1,638	1,874	2,365	2,367	2,431	2,647	2,973
Victoria ..	796	985	1,062	1,803	1,964	1,502	1,808	2,323	2,340	2,403	2,585	2,909
Queensland ..	901	997	1,035	1,879	1,976	1,720	1,885	2,288	2,326	2,384	2,580	2,840
South Australia ..	819	1,013	1,061	1,697	1,891	1,423	1,725	2,212	2,228	2,285	2,496	2,841
Western Australia	1,052	1,152	1,223	1,832	1,960	1,584	1,956	2,368	2,389	2,424	2,597	2,888
Tasmania ..	719	799	1,027	1,745	1,840	1,519	1,738	2,268	2,273	2,336	2,512	2,861
Australia ..	848	1,000	1,081	1,826	1,972	1,584	1,846	2,326	2,339	2,400	2,598	2,914

(iii) *Effective or Real Wage Index-numbers, Adult Males, 1911 to 1948—States.* In obtaining the effective wage index-numbers in the following table, the nominal wage index-numbers shown above have been divided by the corresponding retail price index-numbers for the capital city and multiplied by 1,000. Since the "C" series index-numbers were not compiled for periods prior to November, 1914, it has been assumed that fluctuations between 1911 (the base of the table) and 1914 in the "C" series would have been similar to the fluctuations observed in the "A" series. A table showing effective or real wage index-numbers from 1901 to 1937 measured in terms of purchasing power over the "A" series regimen appeared in previous issues of the Official Year Book, see No. 37, page 473.

EFFECTIVE OR REAL WAGE INDEX-NUMBERS: ADULT MALES (FULL WORK).

Measured in terms of purchasing power over the "C" series regimen.

(Base: Weighted Average Real Wage in Australia in 1911 = 1,000.)

State.	1911.	1914.	1921.	1929.	1933.	1939.	1944.	1945.	1946.	1947.	1948.
New South Wales	925	1,073	1,130	1,186	1,207	1,247	1,249	1,258	1,316	1,359
Victoria	954	1,084	1,164	1,147	1,180	1,234	1,243	1,260	1,312	1,355
Queensland	1,022	1,227	1,290	1,382	1,306	1,288	1,307	1,314	1,367	1,379
South Australia	914	1,034	1,099	1,086	1,147	1,214	1,218	1,229	1,291	1,341
Western Australia	1,043	1,096	1,152	1,177	1,308	1,292	1,300	1,296	1,348	1,377
Tasmania	902	984	1,108	1,110	1,153	1,237	1,237	1,237	1,285	1,334
Australia ..	1,000	948	1,087	1,151	1,187	1,211	1,246	1,252	1,263	1,318	1,357

In the table above, the effective wage index-numbers are computed to the one base, that of Australia for 1911. As the index-numbers are comparable in all respects, comparisons may be made as to the increase or decrease in the effective wage index-number for any State over any period of years.

(iv) *Effective or Real Wage Index-numbers, 1901 to 1948—Australia.* In the following table similar index-numbers are given for Australia as a whole under both the "A" and "C" series. These are obtained by dividing the nominal wage index-numbers for Australia for the year concerned by the corresponding retail price index-numbers for the six capital cities and multiplying by 1,000.

NOMINAL AND EFFECTIVE OR REAL WAGE INDEX-NUMBERS (FULL WORK).

(Base : Weighted Average Real Wage in Australia in 1911 = 1,000.)

Year.	Nominal Weekly Wage Index- numbers.	Retail Price Index-numbers.		Effective or Real Wage Index-numbers, i.e., Relative Purchasing Power over Regimen of—	
		“A” Series (Food, Groceries and Rent of all Houses).	“C” Series (All Items).	“A” Series.	“C” Series.
1901	848	880	..	964	..
1911	1,000	1,000	(1,000)	1,000	(1,000)
1916	1,144	1,324	1,319	864	867
1921	1,826	1,697	1,680	1,076	1,087
1926	1,914	1,786	1,677	1,072	1,141
1931	1,752	1,479	1,448	1,185	1,210
1932	1,639	1,403	1,377	1,168	1,190
1933	1,584	1,345	1,335	1,178	1,187
1934	1,590	1,385	1,355	1,148	1,173
1935	1,612	1,420	1,380	1,135	1,169
1936	1,638	1,461	1,409	1,121	1,162
1937	1,707	1,507	1,448	1,133	1,178
1938	1,799	(a)	1,488	(a)	1,209
1939	1,846	(a)	1,526	(a)	1,211
1940	1,889	(a)	1,588	(a)	1,100
1941	1,997	(a)	1,673	(a)	1,194
1942	2,164	(a)	1,809	(a)	1,196
1943	2,309	(a)	1,876	(a)	1,231
1944	2,326	(a)	1,867	(a)	1,246
1945	2,339	(a)	1,868	(a)	1,252
1946	2,400	(a)	1,900	(a)	1,263
1947	2,598	(a)	1,971	(a)	1,318
1948	2,914	(a)	2,148	(a)	1,357

(a) Not available.

NOTE.—For years prior to 1914 the nominal wage index-numbers relate to the end of the year only, but from 1914 onwards these figures, in addition to those for retail prices, are averages for the whole year.

§ 3. Basic Wages in Australia.

1. *General.*—Basic wages in Australia are fixed by various industrial tribunals operating under Commonwealth and State Arbitration Acts, and are varied from time to time according to changes in cost of living, constitution of the family unit, etc. In the industrial legislation of New South Wales, Queensland, South Australia and Western Australia, provision is made for the tribunals appointed under the Acts to determine the basic rates of wage to be paid to adult unskilled workers. In Tasmania provision for the declaration of a basic rate of wage is not included in the industrial Acts in force. The Wages Board system operates in this State, and each Wages Board determines the rate of wage to be paid to the unskilled worker when the determination for an industry or calling is under review. In Victoria, however, the same Wages Board system exists, but by amendments of the Factories Act, operative from 17th October, 1934, Wages Boards are obliged to adopt Commonwealth Award rates and conditions “which such Boards are under the Factories and Shops Acts empowered to include in their determinations.” As the power of the Commonwealth Arbitration Court is limited by the Constitution to the settlement, by conciliation and arbitration, of industrial disputes extending beyond the limits of any one State, no similar provision respecting the determination of a basic wage is to be found in the Commonwealth Conciliation and Arbitration Act. In practice, the Court does declare a Commonwealth basic wage, and uses the wage so declared as a basis for all awards made by it in the exercise of its jurisdiction, except in the case of awards made for Whyalla and Iron Knob where the basis of awards has, since

1947, been the South Australian living wage plus 5s. That is, upon a new basic wage being declared, the awards made in the settlement of all interstate industrial disputes are re-opened and amended accordingly. In addition to the "basic" wage, these tribunals also determine what is known as the "secondary" wage—"the extra payment to be made for trained skill or other exceptional qualities necessary for an employee exercising the functions required."* The term "minimum" wage, on the other hand, is used to express the lowest rate payable in a particular industry, and is either equal to, or greater than, the "basic" wage.

2. The Commonwealth Basic Wage.—(i) *General.* The doctrine of a basic wage was propounded as far back as 1890 by Sir Samuel Griffith, Premier of Queensland, and the same principle was enunciated in the New South Wales Arbitration Court in somewhat similar terms by Mr. Justice Heydon in 1905. In spite, however, of these pronouncements and the fact that wage-fixing tribunals had been in operation as early as 1896 (in the State of Victoria), it was not until 1907 that the first basic wage, as such, was declared by a Court in Australia. This was made by Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration, and it was defined as the lowest wage which can be paid to an unskilled labourer on the basis of "the normal needs of an average employee regarded as a human being living in a civilized community."† This declaration was made by way of an order in terms of Section 2 (d) of the Excise Tariff 1906 in the matter of an application by H. V. McKay, of the Sunshine Harvester Works, Victoria, from which was derived the title of the "Harvester Wage" by which it is popularly known. The rate of wage declared in this case was 7s. per day or £2 2s. per week for Melbourne, the amount considered reasonable for "a family of about five."‡ The constituent parts of this amount were £1 5s. 5d. for food, 7s. for rent, and 9s. 7d. for all other expenditure.

The "Harvester" basic rate was adopted by the Commonwealth Arbitration Court for incorporation in its awards, and practically the same rates continued until 1913, when the Court took cognizance of the retail price index-numbers, covering food and groceries and rent of all houses ("A" series), for the 30 more important towns of Australia, which had been published by the Commonwealth Statistician for the first time in the preceding year. These index-numbers had been taken back to 1901, with the year 1911 as base, and disclosed not only considerable percentage increases since 1907, but also large disparities in the relative purchasing power of money in the various towns. The basic rates for towns were thereafter fixed largely on their respective index-numbers, taking the index-number 875 for Melbourne for the year 1907 as being equivalent to the "Harvester" rate of 42s. per week, or the base of the index (1,000) as being equivalent to 48s. per week. Exceptions were made in the case of many country towns, where certain "loadings" were applied to counterbalance their lower index-numbers due to cheaper rentals.§

In 1922 an amount known as the "Powers' 3s."|| was added as a general "loading" to the weekly wage for the purpose of securing to the worker during a period of rising prices the full equivalent of the "Harvester" standard. In the same year the system was instituted of making regular quarterly adjustments of the basic wage to accord with variations in purchasing power as disclosed by the "A" Series retail price index-numbers, and of basing the adjustments on the index-number for the quarter in place of that for the previous calendar year or the year ended the preceding quarter.

The Commonwealth Conciliation and Arbitration Act provides that the "basic" wage, or any alteration thereof including the principles on which it is computed, together with any variation or interpretation of any award involving any such alteration, shall be considered by a Court constituted by not less than three Judges, and must be approved by a majority of the members of that Court. By a judgment of the High Court on 21st April, 1933, the "basic" wage is taken to mean, for the foregoing purpose, not only the "Harvester" wage but any "loadings" forming part of the primary wage of an unskilled labourer. A "loading" is defined as an addition to the "basic" wage as compensation

* Mr. Justice Higgins—*A New Province of Law and Order*.

† *Ibid.*

‡ See page 428 for Court's interpretation in 1940 Basic Wage Inquiry of the "family unit".

§ As these indexes covered only about 60 per cent. of household expenditure, a low index due to low rentals would wrongly presume low costs in the remaining uninvestigated 40 per cent. of household expenditure and *vice versa*.

|| Awarded by Mr. Justice Powers in the Gas Workers' Case.

for some peculiar condition of labour or environment, and not by way of "margin for skill". The wage payable for skilled labour is assessed on the basis of the "basic" wage, including "loadings".

The adequacy or otherwise of the "Harvester" standard has been the subject of much discussion, the author of the judgment himself urging on several occasions the need for its review. The abnormal conditions during and for some time after the 1914-18 War hindered such a review which was regarded as less urgent by reason of the fact that wages throughout Australia were being automatically adjusted to changes in retail prices. A Royal Commission (referred to later) was appointed in 1919 to assess a basic wage, but its recommendations were not carried out.

No change was made in the method of fixation and adjustment of the basic wage until the onset of the depression which began to be felt severely during 1930. Applications were then made to the Court by employers for some greater measure of reduction of wages than that afforded by the automatic adjustments to falling retail prices. An account of the proceedings which resulted in the Court reducing all wages under its jurisdiction by 10 per cent. from 1st February, 1931, is given in *Labour Report* No. 23, page 74. Reference is also made to the Court's refusal in June, 1932, and May, 1933, to remove this special reduction.

(ii) *Basic Wage Inquiry*, 1934. The "Harvester" standard, adjusted to retail price variations, continued as the theoretical basis of the wage of the Commonwealth Court until 30th April, 1934, when it was superseded by a judgment delivered on 17th April, 1934, full particulars of which appear in *Official Year Book* No. 29, 1936, page 545. The basic wage declared on this occasion (subsequently referred to as the "Needs" Basic Wage 1934) was as follows for the six capital cities:—

		<i>s.</i>	<i>d.</i>			<i>s.</i>	<i>d.</i>
Sydney	..	67	0	Adelaide	..	64	0
Melbourne	..	64	0	Perth	..	66	0
Brisbane	..	61	0	Hobart	..	67	0

Six Capital Cities, 65s. 0d.

The following is a comparison for the capital cities of the basic rates granted by the judgment and those ruling under previous practices of the Court:—

COMPARISON OF BASIC RATES AWARDED FOR CAPITAL CITIES.

City.	New Rates Awarded 1st May, 1934.	Rates being paid prior to 1st May, 1934.		Increase (+) or Decrease (−) in New Rates as compared with—			
		Under "D" Series.	Under "A" Series.	"D" Series.		"A" Series.	
		10 per cent. "Cut." (a)	Series (Full). (b)	Full.	Less 10 per cent. "Cut."	Full.	Less 10 per cent. "Cut."
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>
Sydney ..	67 0	66 11	72 0	−7 4	+0 1	−5 0	+2 2
Melbourne ..	64 0	63 4	67 6	−6 4	+0 8	−3 6	+3 3
Brisbane ..	61 0	59 4	62 0	−4 11	+1 8	−1 0	+5 2
Adelaide ..	64 0	60 2	63 0	−2 10	+3 10	+1 0	+7 4
Perth ..	66 0	59 3	64 0	+0 2	+6 9	+2 0	+8 5
Hobart ..	67 0	64 10	70 0	−5 0	+2 2	−3 0	+4 0
Six Capitals ..	65 0	63 9	68 0	−5 10	+1 3	−3 0	+3 10

(a) Calculated to nearest rd., and including the equivalent of the "Powers' 3s." to the nearest 6d., and including "Powers' 3s." (in full).

(b) Calculated

The 10 per cent. special reduction in wages referred to above ceased to operate upon the introduction of the new rates, and the basis of the periodical adjustments to retail price variations was transferred from the "A" and the "D" Series to the "C" Series of index-numbers which covers Food and Groceries, Rent of 4-roomed and 5-roomed Houses, Clothing, Fuel, Light, Household Utensils, Household Drapery, Fares, and other Miscellaneous household requirements. The base of the index (1,000) was taken by the Court as equal to 81s. per week. This gave the rates in Column 2 for the capital cities on the basis of their respective index-numbers. In effect, the new rate for the six capital cities was the same as that previously paid under the "A" Series, without the "Powers' 3s." and without the 10 per cent. reduction. Certain towns gained and others lost in comparison with rates under the "A" Series, owing to the different relationship of towns under the "A" and the "C" Series.

In view, however, of the fact that the vast majority of workers were being paid the rates shown in Column 3 under the "D" Series Retail Price Index (which rates allowed for the 10 per cent. "cut" in wages), the differences compared with the full basic wage standard established by the Court from 1st May, 1934 by means of this Series were as shown in Column 5. The full rates under this Series may be obtained by adding one-ninth to those rates in Column 3.

(iii) *Basic Wage Inquiry, 1937.* In May, 1937, the Commonwealth Court heard an application by the combined unions for an increase in the basic wage. The unions asked that the equivalent of the base (1,000) of the "C" Series Index be increased from 81s. to 93s. which on current index-numbers would have represented an average increase of about 10s. per week. The hearing extended from 10th May to 4th June, 1937, and the Court delivered judgment on 23rd June. The chief features of the judgment were :—

(a) Various amounts were added to the basic wage not as an integral, and therefore adjustable, part of that wage, but as "loadings" on the rates payable under the "shilling table" as determined by the 1934 judgment. The latter was referred to in the judgment as the "needs" portion of the total resultant basic wages. The "loadings" and resultant "total basic wages" for the six capital cities were as follows :—

City.				"Needs" Basic Wage.	"Loading."	Total Basic Wage.
				s. d.	s. d.	s. d.
Sydney ..	..	..	..	72 0	6 0	78 0
Melbourne ..	..	..	..	69 0	6 0	75 0
Brisbane ..	..	..	..	68 0	6 0	74 0
Adelaide ..	..	..	..	68 0(a)	4 0	72 0
Perth ..	..	..	..	70 0(a)	4 0	74 0
Hobart ..	..	..	..	70 0(b)	4 0	74 0
Six Capitals ..	..	..	..	70 0	5 0	75 0

(a) An additional 1s. was actually being paid under the "2s. minimum adjustment" provision.
 (b) One shilling less was being paid under the "2s. minimum adjustment" provision.

(b) Female and junior rates were left for adjustment by individual Judges when dealing with specific awards.

The main parts of the judgment are reprinted in Official Year Book No. 30, and in *Labour Report* No. 28, p. 77.

(iv) *"Lag" in Adjustments.* The Commonwealth Court on 19th December, 1939 heard an application by the unions that the date of adjustment of the basic wage in accordance with the variations in the "Court" Series of index-numbers be brought nearer to the period upon which the variation was based. In a judgment delivered on

the same day the Court directed that such adjustments be made one month earlier. The effect, therefore, was to make future adjustments operative from the beginning of the first pay-period to commence in a February, a May, an August or a November.

(v) *Basic Wage Inquiry, 1940.* On 5th August, 1940 the Full Court commenced the hearing of an application by the combined unions for an increase in the existing basic wage by raising the value of 1,000 (the base of the "C" Series Index upon which the "Court" Series are based) from 8rs. to 100s. per week, and the abolition of the present "Prosperity" loadings, which would be regarded as incorporated in the new rate mentioned. Judgment was delivered on 7th February, 1941, the Court unanimously refusing to grant any increase, and deciding that the application should not be dismissed but stood over for further consideration after 30th June, 1941. The application was refused mainly owing to the uncertainty of the economic outlook under existing war conditions (*see* (vi) following).

In regard to the popular idea that the basic wage of the Commonwealth Court of Conciliation and Arbitration was identified with a specific family unit, the Chief Judge made the following statements to clarify the position: "The Court has always conceded the 'needs' of an average family should be kept in mind in fixing a basic wage. But it has never as the result of its own inquiry specifically declared what is an average family or what is the cost of a regimen of food, clothing, shelter and miscellaneous items necessary to maintain it in frugal comfort, or that a basic wage should give effect to any such finding. In the end economic possibilities have always been the determining factor What should be sought is the independent ascertainment and prescription of the highest basic wage that can be sustained by the total of industry in all its primary, secondary and ancillary forms. That, no doubt, is the object, but the adoption of something like the real average family as the unit to be provided for is not without its use in the attainment of that object. There is no clear means of measuring the general wage-paying capacity of the total industry of a country. All that can be done is to approximate and one of the methods of approximation is to find out the actual wage upon which well-situated labourers are at the time maintaining the average family unit. We may be pardoned for saying that Mr. Justice Higgins very wisely used this criterion in the 'Harvester' case. Moreover, if the average-sized families of such well-situated labourers have become accustomed to enjoy, and do actually enjoy, a certain standard of living in our community, it may reasonably be assumed that such a standard for all labourers is probably not beyond the capacity of industry in general to provide. Therefore in determining the amount of a living or basic wage there is sound economic warranty for the ascertainment of the real average family unit and of the cost of providing something like the standard which such families of well-employed labourers have already reached. But obviously, if the real average family unit is departed from, or a standard is sought for the likely maintenance of which experience gives no reason to hope, then an unrealizable wage-level may be ordained It may be that in the light of past experience the Court should conduct a specific inquiry as to the cost of living of an average family, but under war conditions, such an inquiry would be futile. More than ever before wage fixation is controlled by the economic outlook".

The Chief Judge further stated: "I was impressed by the new evidence and argument as to the inadequacy of the earnings of the lower-paid wage earners with families. On our accepted standards of living, looking at it from the needs point of view only, I regard the present basic wage as adequate for a family unit of three persons, but think it offers only a meagre existence for a family unit of four. When the unit gets beyond four hardship is often experienced." He suggested that the more logical system would be to grade the basic wage according to family responsibilities and that, notwithstanding the increase in aggregate wages, the benefits resulting from a re-apportionment of national income to increase the wages of those with more than one dependent child would more than offset the inflationary tendency of provision for a comprehensive scheme of child endowment, and that if a scheme of this nature were established, as recently announced

by the Commonwealth Government*, future fixations of the basic wage would be greatly simplified. The other two Judges (O'Mara, J., and Piper, J.), in separate judgments, agreed with that of the Chief Judge, particularly in regard to the need for a child endowment scheme as a solution of the main problem.

(vi) "*Interim*" Basic Wage, 1946. As the result of (a) an application made on 30th October, 1946 (during the course of the Standard Hours Case) by the Attorney-General for the Commonwealth for the restoration to the Full Court List of certain adjourned 1940 basic wage applications (see (v) *supra*), (b) a number of fresh cases which had come to the Court since 1941, and (c) an application by the Australasian Council of Trade Unions on behalf of the unions for an "*interim*" basic wage declaration, the Court, on 25th November, 1946, commenced the hearing of this case. The case ended on 10th December, 1946 and judgment was delivered on 13th December, 1946 whereby an increase of 7s. per week was granted in the "*needs*" portion of the basic wage then current and based on the weighted average "*Court*" index-number for the Six Capital Cities (as a whole) for the September quarter, 1946. This had the effect of raising the base (1923-27) index-number of the "*Court*" Series Index from 81.0 to 87.0, the corresponding "*needs*" basic wage from 81s. to 87s. per week, and the current rate for the Six Capital Cities as a whole from 93s. to 100s. per week. All "*loadings*" on the basic wage were retained at their existing amounts until otherwise ordered by the Court.

The immediate monetary effect was to increase by 7s. per week the basic wage in each of the capital cities (with the exception of Hobart, where the increase was 6s.), and in most of the other towns or combinations of towns—the position of the index-number for a town in the new Automatic Adjustment Scale (on the new base rate of 87s.) determining whether the increase was 7s. or 6s. The date of operation for the majority of workers affected was the beginning of the first pay-period commencing in the month of December, 1946, in certain industries as from 1st December, 1946 and for certain other groups of workers from dates fixed by Judges dealing with individual applications for the increase.

Further details of this judgment may be obtained from *Labour Report* No. 37, page 78.

(vii) *Current Commonwealth Basic Wage Rates*. The basic wage rates of the Commonwealth Court for adult males, including the "*loadings*" granted in 1937, operative at 1st November, 1949, are as follows:—

	s.	d.		s.	d.
New South Wales—			South Australia—		
Sydney	132	0	Adelaide	126	0
Newcastle (a) ..	132	0	Five Towns (c) ..	126	0
Port Kembla-Wollongong(a)	132	0	Western Australia—		
Broken Hill	141	0	Perth	129	0
Five Towns (c) ..	132	0	Kalgoorlie	137	0
Victoria—			Geraldton	134	0
Melbourne	130	0	Five Towns (c) ..	130	0
Geelong (b)	130	0	Tasmania—		
Warrnambool (b) ..	130	0	Hobart	128	0
Mildura (b)	130	0	Launceston	126	0
Yallourn (b)	136	6	Queenstown	126	0
Five Towns (c) ..	129	0	Five Towns (c) ..	127	0
Queensland—					
Brisbane	125	0	Thirty Towns(c) ..	129	0
Five Towns (c) ..	125	0	Six Capital Cities (c) ..	129	0
(a) Based on Sydney.	(b) Based on Melbourne.	(c) Weighted average.			

* Legislation covering a scheme to become operative on 1st July, 1941, was actually passed by the Commonwealth Parliament on 3rd April, 1941—see page 436 for details.

The rate for provincial towns, other than those mentioned above, is 3s. less than that of their respective capital cities. The rate for adult females varies, approximately, from 54 to 75 per cent. of the adult male rate.

The following table shows the movements of this wage in all capital cities and the six capital cities as a whole during the years 1939 to 1949.

BASIC WEEKLY WAGE RATES (a), CAPITAL CITIES, FIXED BY COMMONWEALTH COURT OF CONCILIATION AND ARBITRATION.

Date Operative.(b)	Sydney.	Mel- bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals.
1939—	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
September ..	81 0	81 0	76 0	78 0	77 0	77 0	79 0
1940—							
November ..	85 0	84 0	79 0	80 0	80 0	81 0	83 0
1941—							
November ..	89 0	88 0	84 0	84 0	85 0	85 0	87 0
1942—							
November ..	97 0	97 0	91 0	93 0	91 0	92 0	95 0
1943—							
November ..	99 0	98 0	93 0	94 0	94 0	95 0	97 0
1944—							
November ..	99 0	98 0	93 0	93 0	94 0	94 0	96 0
1945—							
November ..	99 0	98 0	93 0	93 0	94 0	94 0	96 0
1946—							
February ..	..	..	..	94 0	..	95 0	..
May ..	..	..	94 0	..	..	..	97 0
August ..	100 0	99 0	..	95 0	95 0	96 0	98 0
November ..	101 0	..	..	..	..	97 0	..
December ..	108 0	106 0	101 0	102 0	102 0	103 0	105 0
1947—							
February ..	..	107 0	103 0	..	103 0	104 0	106 0
May ..	110 0	..	104 0	103 0	..	..	..
August ..	..	108 0	..	104 0	104 0	105 0	107 0
November ..	112 0	109 0	105 0	106 0	106 0	107 0	109 0
1948—							
February ..	114 0	113 0	107 0	108 0	107 0	110 0	111 0
May ..	116 0	115 0	110 0	111 0	110 0	112 0	114 0
August ..	120 0	117 0	113 0	114 0	112 0	115 0	116 0
November ..	122 0	120 0	115 0	116 0	116 0	118 0	119 0
1949—							
February ..	124 0	123 0	118 0	119 0	118 0	121 0	122 0
May ..	127 0	125 0	119 0	121 0	120 0	124 0	124 0
August ..	130 0	128 0	122 0	124 0	126 0	127 0	127 0
November ..	132 0	130 0	125 0	126 0	129 0	128 0	129 0

(a) Rates include "prosperity loadings" granted from 1st July, 1937 and increase in "needs" basic wage granted from 1st December, 1946. (b) Generally from the beginning of the first pay period commencing in the month indicated.

3. **Australian Territories.**—A full account of the basis upon which the basic wages are determined in (a) Australian Capital Territory and (b) Northern Territory (both north and south of the 20th parallel of South Latitude) will be found on pages 87 to 92 of *Labour Report No. 37*, for 1948.

The following table gives a summary of variations in the basic wage in the Australian Capital Territory from 1st May, 1922, the first determination of the Industrial Board, to 1949.

BASIC WAGE VARIATIONS IN THE AUSTRALIAN CAPITAL TERRITORY.

Date of Operation.	Basic Wage per Week (Males.)	Date of Operation.	Basic Wage per Week (Males.)
	£ s. d.		£ s. d.
1st May, 1922	4 5 0	10th October, 1941 ..	4 15 6
10th October, 1926 ..	5 0 0	1st December, 1946 ..	5 13 6
25th July, 1931	4 3 4	1st May, 1947	5 14 6
21st October, 1932 ..	4 5 0	1st November, 1948 ..	6 8 6
1st July, 1936	4 5 6	1st November, 1949 ..	6 19 6

In the Northern Territory there are two basic wages operating, one in respect of areas north of the 20th parallel of South Latitude, generally referred to as the "Darwin" rate and the other in respect of areas south of that parallel and extending down to the 26th parallel (the "Port Augusta" rate). The main variations in these rates are set out in the following table.

BASIC WAGE VARIATIONS IN THE NORTHERN TERRITORY.

" Darwin " Rate.		" Port Augusta " Rate.	
Date of Operation.	Basic Wage per Week (Adult Males).	Date of Operation.	Basic Wage per Week (Adult Males).
	£ s. d.		£ s. d.
15th March, 1915	3 17 0	15th March, 1915	3 17 0
1st July, 1924	5 4 6	1st July, 1924	5 4 6
31st October, 1927	5 10 0	31st October, 1927	5 10 0
3rd February, 1935	4 10 0	3rd February, 1935	4 0 0
1st August, 1938	4 13 9	1st September, 1938	4 7 0
12th November, 1939 ..	5 10 0	1st November, 1939	4 8 0
7th April, 1941	5 12 0	1st June, 1941	4 15 0
1st December, 1946	6 15 9	1st December, 1946	5 14 0
20th May, 1948	7 0 9	1st September, 1948	5 18 0
1st November, 1948	7 5 9	1st November, 1948	6 8 0
1st November, 1949	7 19 9	1st November, 1949	6 18 0

4. *Basic Wage Rates for Females.*—Reference should be made to *Labour Report* No. 37 for 1948 (page 82) for a statement of the general principles followed by the Commonwealth Court of Conciliation and Arbitration in fixing basic wage rates for females in relation to those of males, and of the principles followed by the Women's Employment Board which operated over the period March, 1942 to October, 1944 in respect only of females in war industries employed on work usually performed by males, or on work which, immediately prior to the outbreak of war, was not performed in Australia by any person.

5. *State Basic Wages.*—(i) *New South Wales.* The first determination under the New South Wales Industrial Arbitration Act of a standard "living" wage for adult male employees was made on 16th February, 1914, by the Court of Industrial Arbitration.

The Board of Trade was established in 1918 with power to determine the living wage for adult male and female employees in the State. The Board made numerous declarations from 1918 to 1925, but ceased to function after the Industrial Arbitration (Amendment) Act 1926 established the Industrial Commission of New South Wales, which exercised the powers of the Board of Trade from 15th April, 1926.

The adult male rate was determined on the family unit of a man, wife and two children from 1914 to 1925; a man and wife only in 1927, with family allowances for dependent children; and a man, wife and one child in 1929, with family allowances for other dependent children. With the adoption in 1937 of the Commonwealth basic wage referred to below, however, the identification of a specified family unit with the basic wage disappeared.

Employees in rural industries are not covered by the rates in the table referred to below; a wage for rural workers of £3 6s. per week was in force for twelve months from October, 1921, and a rate of £4 4s. operated from June, 1927, to December, 1929, when the power of industrial tribunals to fix a living wage for rural workers was withdrawn.

A table showing the variations in the living wages determined by the industrial tribunals of New South Wales up to 27th April, 1937 was published in previous issues of the Official Year Book (*see* No. 37, page 481). Since 27th April, 1937, changes have been made automatically in accordance with the procedure outlined in the next paragraph, and the latest current rate payable will be found in the table in sub-par. vi., page 435.

Following on the judgment of the Commonwealth Arbitration Court referred to on page 427, the Government of New South Wales decided to make the State Basic Wage accord with the Commonwealth rates ruling in the State, and secured an amendment of the Industrial Arbitration Act to give effect thereto. The Act (No. 9 of 1937) was passed on 7th October, 1937, and was to operate from the commencement of the first pay period in October, practically from 1st October, 1937. The general principles laid down by the Commonwealth Court were followed as closely as practicable, and provision was made for the automatic adjustment of wages in conformity with variations in retail prices as shown by the Commonwealth Court's "All Items" Retail Price Index-numbers, shortly known as the "Court" Series of Index-numbers. The Commonwealth Court's principle of treating the "prosperity loadings" as a separate and non-adjustable part of the total basic wage was adopted. The basic rate for adult females was fixed at 54 per cent. of the adult male rate to the nearest sixpence. The provisions of the main Acts for the periodic declaration of the living wage by the Industrial Commission were repealed, but the amending Act placed on the Commission the responsibility of altering all awards and agreements in conformity with the intentions of the new Act; to define boundaries within which the various rates are to operate; and to specify the appropriate "Court" Series retail price index-numbers to which they are to be related.

Compared with State adult basic wages of £3 11s. 6d. per week for males, and £1 18s. 6d. for females operative at the time, the alteration represented for males increases of 6s. 6d. in Sydney; 3s. 6d. in Country districts (with certain exceptions); and 4s. 6d. for railway and other Crown employees as defined by the Act. For females the increases were 54 per cent. of the foregoing, and amounted to 3s. 6d., 2s., and 2s. 6d., respectively.

The latest rates applicable in the metropolitan area from 1st November, 1949 are £6 12s. for males and £3 11s. 6d. for females.

The principle of supplementing wages by a payment in respect of dependent children under fourteen years of age was operative in New South Wales from July, 1927 until superseded by the Commonwealth Government Scheme operative from 1st July, 1941, and a brief account of the main features of the system appears in Official Year Book No. 37, pp. 485-6.

(ii) *Victoria and Tasmania.* A State basic rate of wage is not declared in Victoria and Tasmania. In these States the Wages Board system of wage fixation is in operation, and each Board determines the minimum rate of wage to be paid in the industry or calling under review. In the majority of cases the practice of the Commonwealth Arbitration Court of adjusting wages in accordance with variations in retail prices has been followed in the past by these bodies. In the case of Victoria, by amendments of the Factories and Shops Acts No. 4275 of 1934 and No. 4461 of 1936, it is now obligatory on all Wages Boards to adopt such provisions of Commonwealth Awards which such Boards are empowered under the Factory and Shops Acts to include in their determinations. The Secretary of Labour is also empowered under this Act to make adjustments of wages according to variations in retail price index-numbers without calling the Board together. The latest Commonwealth adult male rate for Melbourne is £6 10s. per week (operative from 1st November, 1949), and for Hobart £6 8s. per week (operative from 1st November, 1949). Female rates vary approximately from 54 to 75 per cent. of those rates.

(iii) *Queensland.* The first formal declaration by the Industrial Arbitration Court in this State of a basic wage was gazetted on 24th February, 1921. Prior to this declaration the rate of £3 17s. per week for adult males had been generally recognized by the Court in its awards as the basic or living wage. The basic wage is nominally intended to provide for the needs of a man, his wife and three children. The variations in the adult basic wages determined by the Industrial Arbitration Court up to 1st April, 1937, were published in previous issues of the Official Year Book (*see* No. 37, page 482). Variations since that date are shown below:—

BASIC WAGE VARIATIONS IN QUEENSLAND. (*State Jurisdiction.*)

Date of Operation.	Adult Basic Wage.			
	Male.		Female.	
	£	s. d.	£	s. d.
1st April, 1938	4	1 0	2	3 0
7th August, 1939	4	4 0	2	5 0
31st March, 1941	4	9 0	2	8 0
4th May, 1942 (a)	4	11 0	2	9 6
23rd December, 1946 (b)	5	5 0	3	0 6

(a) Quarterly adjustments provided by judgment of 21st April, 1942—*see* below for latest rates.

(b) Consequent on "Interim" basic wage of Commonwealth Court of December, 1946.

The rates shown above are applicable throughout the Southern Division (Eastern District), which includes the metropolitan area: allowances are added for the following divisions—Northern (Eastern District), 10s.; Northern (Western District), 17s. 4d.; Mackay, 5s. 6d.; and Southern (Western District), 7s. 4d. Half of these allowances are granted to females.

On 15th April, 1942, the Court declared the rates operative from 31st March, 1941 as adequately meeting the requirements of Section 9 of the Industrial Conciliation and Arbitration Act 1932, having regard to the level of the "C" Series (All Items) retail Price Index for Brisbane for the December quarter, 1941. In order to ensure, however, that it would continue to do so under present exceptional conditions, the Court decided to make a quarterly declaration of the basic wage on the basis of the variations in the "cost of living" as disclosed by the "C" Series Index for Brisbane, commencing with the figures for the March quarter, 1942. This declaration was duly made by the Court on 21st April, 1942, at the rates of £4 11s. for adult males, and £2 9s. 6d. for adult females. The latest rates are £6 9s. for adult males, and £3 19s. 6d. for adult females, and have been operative since 1st November, 1949.

(iv) *South Australia.* The Industrial Code 1920-1948 provides that the Board of Industry shall after public inquiry declare the living wages to be paid to adult male and female employees. Prior to the passing of this Act the living wage was declared by the Industrial Court, the first award, 7s. per day, being made by Mr. Justice Gordon in the Brushmakers' Case in December, 1908.

The first declaration by the Board of Industry was made on 15th July, 1921, when the living wage for adult male employees in the metropolitan area was determined at £3 19s. 6d. per week.

The family unit is not specifically defined in the Code, but the South Australian Industrial Court in 1920 decided that the average employee in respect of whom the living wage is to be declared is a man with a wife and three children.

Following on the declaration of an "interim" increase in its "needs" basic wage by the Commonwealth Court of Conciliation and Arbitration on 13th December, 1946 (*see* p. 429) the South Australian Parliament, by virtue of the Economic Stability Act No. 52 of 1946, and other enabling powers, provided for the Governor, by proclamation, to declare the "daily living wage" for adult males in the metropolitan area to be one-sixth of the Commonwealth weekly basic wage for this area (102s. per week, inclusive of the "prosperity loading" of 4s.) and to be operative from 7th January, 1947. The Act mentioned also provided for similar proclamations in respect of any adjustment of such wage, but the powers of the Board of Industry to declare a "living wage" were retained, and any such wage so declared will supersede that declared by proclamation.

The variations in the living wages determined by the Board of Industry up to 25th November, 1937, were published in previous issues of the Official Year Book (*see* No. 37 page 483). Variations since that date are shown below:—

LIVING WAGE VARIATIONS IN SOUTH AUSTRALIA. (*State Jurisdiction.*)

Male.			Female.		
Date of Operation.		Living Wage per Week.	Date of Operation.		Living Wage per Week.
		£ s. d.			£ s. d.
5th January, 1939	..	3 18 0	5th January, 1939	..	1 18 0
28th November, 1940	..	4 4 0	28th November, 1940	..	2 1 0
26th November, 1941	..	4 7 0	26th November, 1941	..	2 3 6
15th October, 1942	..	4 14 0	15th October, 1942	..	2 6 2
26th September, 1946	..	4 18 6	26th September, 1946	..	2 15 0
7th January, 1947 (a)	..	5 2 0	7th January, 1947	..	2 17 0
21st August, 1947	..	5 4 0	21st August, 1947	..	2 18 0
13th November, 1947	..	5 6 0	13th November, 1947	..	2 19 0
7th July, 1948	..	5 17 0	7th July, 1948	..	3 6 6
19th May, 1949	..	6 5 0	19th May, 1949	..	3 8 6

(a) Commonwealth rate for metropolitan area adopted.

(v) *Western Australia.* The Industrial Arbitration Act 1912-1948 provides that the Court of Arbitration shall determine and declare a basic wage to operate from 1st July of each year and, wherever and whenever necessary, differential basic rates in special or defined areas of the State. In an amending Act of 1930 provision is made for quarterly adjustments when the Government Statistician reports a variation in the cost of living of 1s. or more per week compared with the previous quarter.

The first declaration of the basic wage by the Court of Arbitration, since the authority to fix one was vested in the Court in 1925, was made on 11th June, 1926. The family unit is not specifically defined in the Act, but it has been the practice of the Court to take as a basis for its calculations a man, his wife and two dependent children. The variations in the annual declarations of the Court of Arbitration up to 1937 were published in previous issues of the Official Year Book (*see* No. 37, page 484). Variations since 1937 are shown in the following table:—

BASIC WAGE VARIATIONS IN WESTERN AUSTRALIA. (*State Jurisdiction.*)

Date of Operation.	Metropolitan Area.		South-West Land Division (excluding Metropolitan Area).		Other Parts of State.	
	Male.	Female.	Male.	Female.	Male.	Female.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1st July, 1938 ..	4 0 0	2 3 2	4 1 0	2 3 9	4 13 3	2 10 4
" " 1939 ..	4 2 2	2 4 4	4 3 1	2 14 10	4 16 4	2 12 0
" " 1940 ..	4 2 8	2 4 8	4 3 3	2 4 11	4 16 3	2 12 0
" " 1941 ..	4 8 0	2 7 6	4 9 3	2 8 2	5 3 6	2 15 11
" " 1942 ..	4 10 5	2 8 10	4 10 10	2 9 1	5 5 7	2 17 0
" " 1943 ..	4 19 1	2 13 6	4 18 1	2 13 0	5 5 9	2 17 1
" " 1944 ..	4 19 11	2 13 11	4 19 8	2 13 10	5 7 1	2 17 10
" " 1945 ..	5 0 1	2 14 1	4 19 7	2 13 9	5 7 5	2 18 0
" " 1946 ..	5 1 1	2 14 7	5 0 6	2 14 3	5 9 0	2 18 10
26th Feb., 1947 (a) ..	5 7 1	2 17 10	5 6 6	2 17 6	5 15 4	3 2 3
1st July, 1947 ..	5 7 10	2 18 3	5 7 3	2 17 11	5 16 0	3 2 8
" " 1948 ..	5 15 9	3 2 6	5 15 2	3 2 2	6 4 9	3 7 4
" " 1949 ..	6 7 1	3 8 8	6 6 9	3 8 5	6 15 1	3 12 11

(a) Consequent on "Interim" Basic Wage of Commonwealth Court of December, 1946.

The latest rates payable in accordance with the quarterly adjustments declared by the Court are shown in par. (vi) below.

(vi) *Current State Basic Wage Rates.* In the following table are given the current basic wage rates declared by the various State tribunals which were operative on 1st November, 1949:—

BASIC WEEKLY WAGE RATES FIXED BY STATE INDUSTRIAL TRIBUNALS.

State.	Basic Wage.		Date of Operation.	Family Unit (for Male Rate.)
	Males.	Females.		
	£ s. d.	£ s. d.		
New South Wales(a)	6 12 0	3 11 6	1.11.49	(b)
Victoria(c)	(6 10 0)	(3 10 0)	1.11.49	(c)
Queensland(d)	6 9 0	3 19 6	31.10.49	Man, wife and three children
South Australia	6 5 0	3 8 6	19.5.49	" " "
Western Australia(e)	6 15 11	3 13 5	24.10.49	Man, wife and two children
Tasmania (c)	(6 8 0)	(3 9 0)	1.11.49	(c)

(a) Sydney, Newcastle, Port Kembla—Wollongong, Broken Hill—males £7 1s., females £3 16s. Elsewhere, males £6 9s., females £3 9s. 6d. (b) Commonwealth Basic Wage operative—no defined family unit. (c) None declared, but rates (Capital City) shown are those of Commonwealth Court which are followed to a large extent. (d) Southern Division (Eastern District—including Brisbane). Allowances are added for the following Divisions—Northern (Eastern District), 10s.; Northern (Western District), 17s. 4d.; Mackay, 5s. 6d.; and Southern (Western District), 7s. 4d. Half of these allowances are granted to females. (e) Metropolitan Area. Basic wage for Gold-fields areas and portions of State excluding the South-West Land Division—males £7 2s. 11d.; females £3 17s. 2d. South-West Land Division (excluding Metropolitan Area)—males £6 15s. 4d.; females £3 13s. 1d.

6. **Royal Commission on the Basic Wage, 1920.**—Only one comprehensive attempt has been made by the Commonwealth authorities to ascertain specifically what the actual requirements were in the various States according to reasonable standards of comfort, including all matters comprised in the ordinary expenditure of a household in respect of a family consisting of a man, wife and three children under fourteen years of age.

The attempt referred to was made by a Royal Commission which in its report, issued in 1920, recommended the following amounts for the various capital cities :—

						£	s.	d.
Sydney	..	..	..	..	..	5	17	1
Melbourne	..	..	..	..	..	5	16	6
Brisbane	..	..	..	..	..	5	6	2
Adelaide	..	..	..	..	..	5	16	1
Perth	..	..	..	..	..	5	13	11
Hobart	..	..	..	..	..	5	16	11
Six Capitals (Weighted Average)	..	..	..	..	..	5	15	8

The recommendations of this Commission were not carried out owing largely to the marked advance of the amounts suggested over ruling rates* and the grave doubts expressed as to the ability of industry to pay such rates.

§ 4. Child Endowment in Australia.

1. **General.**—The principle of supplementing wages by a payment in respect of dependent children under sixteen years of age became prominent in Australia following the recommendations of the Royal Commission on the Basic Wage of 1920, and was implemented in Australia as described in the following paragraphs. The system has been in force in various forms in England and on the Continent as far back as 1795, the first instance occurring in England in that year.

2. **National Scheme.**—The Commonwealth Government, in June, 1927, called a conference in Melbourne of the Premiers of the several States to consider the question from a national standpoint. The Prime Minister submitted various estimates of the cost of endowing dependent children under fourteen years of age in Australia at 5s. per week. After discussion, it was decided to refer the matter to a Royal Commission, to be appointed by the Commonwealth Government.

The Commission submitted its report on 15th December, 1928. It was not unanimous in its findings, and the opinions and recommendations of the members were embodied in two separate reports, which dealt exhaustively with the constitutional aspects, existing systems, industrial legislation, the basic wage, standard of living, regulation of wages, working conditions and cognate matters.

At the conference of Commonwealth and State Ministers held in Canberra in May, 1929, the Prime Minister stated that the Commonwealth Government was not prepared to adopt the scheme financed entirely from the proceeds of taxation, as had been recommended in the minority report. The Commonwealth Government agreed with the majority of the Commission that child endowment could not be separated from the control of the basic wage—a power which the Commonwealth did not possess and which the States were not prepared to relinquish. The Government, therefore, did not propose to establish any system of child endowment. It was generally agreed that any scheme which would increase the charges upon industry would be unwise at that particular time. The matter of child endowment was accordingly left to be dealt with as the State Governments should think proper.

* The "Harvester" equivalent for Melbourne at the time (September quarter, 1920) was £4 13s. per week, but only £3 18s. to £4 2s. was being paid on the basis of an annual index-number.

The findings and recommendations in the *majority* and *minority* reports are given in *Labour Report*, No. 19.

In 1941, the Commonwealth Government introduced a scheme of child endowment throughout Australia. The necessary legislation* was introduced into Parliament on 27th March, and finally passed on 3rd April, 1941. The main features of the scheme, which came into operation on 1st July, 1941, are as follows:—

(a) Payment at the rate of 10s. per week (5s. per week from 1st July, 1941 to 25th June, 1945, and 7s. 6d. from 26th June, 1945 to 8th November, 1948) for each child under the age of sixteen in excess of one child in each family, provided the persons claiming the endowment, and the child in respect of whom the endowment is claimed, have resided in Australia for a period of twelve months preceding the date of claim.

(b) The endowment is payable to the mother of the child, or to such persons as are prescribed.

(c) Endowment is also payable to approved institutions, not wholly or mainly dependent upon the Commonwealth or a State for their revenue, in respect of all children under 16 years of age maintained therein.

(d) The scheme, which formerly was financed partly from Consolidated Revenue, partly from the abolition of the exemptions from taxation in respect of children after the first, and the major part from a tax of 2½ per cent. of all pay-rolls in excess of £20 per week, is now a charge on the National Welfare Fund.

(e) The general administration of the Act is under the control of the Director-General of Social Services, and the detailed administration is carried out by Directors in each State.

A summary of the operations under the Child Endowment Act from 1st July, 1944 to 30th June, 1949, is given on pp. 330–1 of Chapter IX. "Welfare Services".

3. **Earlier Schemes.**—Consequent upon the operation of the Commonwealth Child Endowment Scheme, appropriate steps were taken for the termination of the schemes operating in the Commonwealth Public Service and in New South Wales. The Commonwealth Public Service Scheme was the first system instituted in Australia and came into operation on 1st November, 1920. In New South Wales an abortive attempt to institute the system was made in 1919 and a scheme was adopted under the Family Endowment Act 1927 which operated from 23rd July, 1927. For further details of these schemes reference may be made to the Official Year Book No. 37, pages 485 and 486.

E.—EMPLOYMENT.

§ 1. Employment.

1. **Total Occupied Persons.**—(i) *General.* The following estimates of the total numbers of occupied males and females are based principally on data from the 1933 Census (June), the National Register (July, 1939), The Civilian Register (June, 1943), the Occupation Survey (June, 1945) and the 1947 Census (June). These sources of information have been supplemented by Pay-roll Tax returns, which commenced in July, 1941.

(ii) *Australia.* The estimates in the table below are divided into three categories (a) Defence Forces; (b) all persons fully occupied as employers, or as self-employed in businesses or on farms; and (c) wage or salary earners fully employed, or occupied as casual, part-time, intermittent or seasonal workers. Wage earners unemployed, in the sense that they are incapacitated or have no work to go to, are excluded, as also are persons engaged on Government relief works.

* Act No. 8, 1941 (Child Endowment Act) as amended by No. 5, 1942, and Nos. 10 and 41, 1945; Act No. 2, 1941 (Pay-roll Tax Assessment Act); and Act No. 3, 1941 (Pay-roll Tax Act).

All unpaid helpers in non-rural industry have been included with wage and salary earners. Male unpaid helpers in rural industry have been included with employers and self-employed persons, as it is considered that the majority of these are sons or other close relatives of farmers working in an unofficial partnership, or as learners with the farm owner. Unpaid female helpers on farms are very numerous, but their exact number is not known. Generally, they combine part-time dairy or other farm work with part-time duties in the home. Together with women occupied in unpaid home duties they have been excluded from the category of occupied persons.

Statistics of net enlistments in the Defence Forces shown in the table below represent total enlistments for full-time duty less deaths and discharges. Prior to December, 1941, men in certain age-groups were called-up for short training courses but these men are excluded from the figures. In July, 1941, the number of such men was approximately 50,000.

TOTAL OCCUPIED PERSONS : AUSTRALIA.

('000.)

Year and Month.	Defence Forces (Net Enlistments), (a)	Employers and Self-employed.			Wage and Salary Earners.			Total Occupied Civilians.	Total Occupied Persons including Forces. (a)
		Rural Industry.	Other Industries.	Total.	Rural Industry.	Other Industries.	Total.		

MALES.

1933—June ..	5.8	292.4	248.3	540.7	200.0	992.0	1,192.0	1,732.7	1,738.5
1939—July ..	12.9	300.0	290.0	590.0	202.0	1,293.1	1,495.1	2,094.1	2,107.0
1941—July ..	282.8d	284.0	208.0	492.0	188.0	1,363.4	1,551.4	2,043.4	2,326.2
1943—June ..	685.0	262.0	150.0	412.0	120.9	1,273.2	1,394.1	1,806.1	2,491.1
1945—June(b) ..	603.5	287.5	187.1	474.6	130.2	1,294.2	1,424.4	1,800.0	2,502.5
1947—June(c) ..	54.5	282.2	287.0	569.2	150.9	1,649.4	1,800.3	2,369.5	2,424.0

FEMALES.

					(e)				
1933—June ..	..	15.1	56.2	71.3	4.4	447.5	451.9	523.2	523.2
1939—July ..	..	16.0	62.0	78.0	4.0	561.6	565.6	643.6	643.6
1941—July ..	1.8	14.0	56.8	70.8	6.0	656.2	662.2	733.0	734.8
1943—June ..	44.0	11.7	34.4	46.1	28.1	682.1	710.2	756.3	800.3
1945—June(b) ..	45.4	17.0	43.1	60.1	23.0	667.1	690.1	750.2	795.6
1947—June(c) ..	1.0	14.4	56.7	71.1	8.0	661.4	669.4	740.5	741.5

PERSONS.

1933—June ..	5.8	307.5	304.5	612.0	204.4	1,439.5	1,643.9	2,255.9	2,261.7
1939—July ..	12.9	310.0	301.0	611.0	202.0	1,851.7	2,053.7	2,737.7	2,750.0
1941—July ..	284.6d	298.0	264.8	562.8	194.0	2,019.6	2,213.6	2,776.4	3,061.0
1943—June ..	729.0	273.7	184.4	458.1	149.0	1,955.3	2,104.3	2,562.4	3,291.4
1945—June(b) ..	648.9	304.5	230.2	534.7	153.2	1,961.3	2,114.5	2,649.2	3,298.5
1947—June(c) ..	55.5	296.0	343.7	640.3	158.9	2,310.8	2,469.7	3,110.0	3,165.5

(a) Includes those serving outside Australia. (b) Occupation Survey, 1st June, 1945.
(c) Subject to revision. (d) Excludes approximately 20,000 men called up for short training courses.
(e) Includes females, in thousands, in private domestic service as follows:—106.7 in June, 1933; 124.5 in July, 1939; 100.0 in July, 1941; 41.5 in June, 1943; 47.6 in June, 1945; and 41.8 in June, 1947.

From June, 1933 to July, 1939, the number of occupied persons of both sexes had increased by 488,000, due to the increases of 223,700 in the number of available bread-winners and to the decrease of 265,200 in the number unemployed from 563,200 to 298,000.

During the war years from July, 1939 to June, 1943, the number of males occupied as civilians decreased by 288,000, while females occupied as civilians increased by nearly 113,000, representing a net decrease of 175,000 persons. This decrease, together with decrease of unemployment (272,000), normal increase of breadwinners (91,000) and an abnormal war-time increase of 178,000 bread-winners (persons who would not otherwise have been working), balanced the net intake into the Defence Forces at June, 1943 (716,000). The preliminary estimate of 661,400 female wage and salary earners employed in non-rural industries as at June, 1947 includes 41,800 private domestics (the preliminary Census figure). The remaining 619,600 females in the estimate include females working part-time. The tentative 1947 Census figure for the same industries (i.e. excluding rural and private domestic) was 576,400. Persons working regularly but for considerably less than normal working hours were instructed on the Census Schedule to exclude themselves from the work force, unless their earnings from such work formed their principal means of livelihood.

(iii) *States.* The following table shows total occupied males and females in each State in July, 1939, and June, 1947, divided into Defence Forces, Employers and Self-employed, and Wage and Salary Earners.

TOTAL OCCUPIED PERSONS: STATES.

('000.)

State.	Defence Forces (Net Enlistments). (a)		Employers and Self-employed.		Wage and Salary Earners.		Total Occupied Persons, including Forces. (a)	
	July, 1939.	June, 1947. (b)	July, 1939.	June, 1947. (b)	July, 1939.	June, 1947. (b)	July, 1939.	June, 1947. (b)
MALES.								
New South Wales ..	4.9	21.3	216.2	200.0	596.2	724.0	817.3	945.3
Victoria ..	4.4	17.2	162.9	158.8	399.5	481.5	566.8	657.5
Queensland ..	1.0	6.9	95.1	96.8	218.6	256.4	314.7	360.1
South Australia ..	1.1	4.3	54.6	51.8	127.7	154.8	183.4	210.9
Western Australia ..	1.0	3.5	47.4	39.9	99.7	115.7	148.1	159.1
Tasmania ..	0.5	1.3	21.5	20.2	46.9	58.3	68.9	79.8
Australia (c) ..	12.9	54.5	599.0	569.2	1,495.1	1,800.3	2,107.0	2,424.0

FEMALES.

New South Wales ..	..	0.4	28.4	26.4	220.8	269.6	249.2	296.4
Victoria ..	..	0.3	25.5	22.7	175.3	203.5	200.8	226.5
Queensland ..	..	0.1	11.1	10.2	71.2	83.7	82.3	94.0
South Australia ..	..	0.1	6.0	5.3	47.4	53.0	53.4	58.4
Western Australia ..	..	0.1	4.8	4.3	33.2	38.6	38.0	43.0
Tasmania ..	..	..	2.2	1.9	16.3	19.1	18.5	21.0
Australia (c) ..	..	1.0	78.0	71.1	565.6	669.4	643.6	741.5

PERSONS.

New South Wales ..	..	4.9	21.7	244.6	226.4	817.0	993.6	1,066.5	1,241.7
Victoria ..	..	4.4	17.5	188.4	181.5	574.8	695.0	767.6	884.0
Queensland ..	..	1.0	7.0	106.2	107.0	289.8	340.1	397.0	454.1
South Australia ..	..	1.1	4.4	60.6	57.1	175.1	207.8	236.8	269.3
Western Australia ..	..	1.0	3.6	52.2	44.2	132.9	154.3	186.1	202.1
Tasmania ..	..	0.5	1.3	23.7	22.1	63.2	77.4	87.4	100.8
Australia (c) ..	..	12.9	55.5	677.0	640.3	2,060.7	2,469.7	2,750.6	3,165.5

(a) Includes those serving outside Australia.
Australian Capital Territory and Northern Territory.

(b) Subject to revision.

(c) Includes Aus-

Between July, 1939 and December, 1948, the occupied population of Australia (including Defence Forces but excluding unemployed, pensioners, retired persons of independent means and dependants) increased by approximately 15.1 per cent. The proportionate increase in each State was as follows: New South Wales, 10.4; Victoria, 15.2; Queensland, 14.4; South Australia, 13.7; Western Australia, 8.6; Tasmania, 15.3.

2. **Wage and Salary Earners in Employment.**—(i) *Australia and States.* Estimates are made monthly of wage and salary earners in employment (excluding employees in rural industry and female domestics in private homes), based on Pay-roll Tax returns and statistics of Commonwealth Government employment. Pay-roll Tax returns cover only a small proportion of wage earners on rural holdings, and practically no private domestic servants. It is not possible to obtain actual numbers of farm employees and private domestic servants except when a Census or quasi-Census such as Occupation Survey (1st June, 1945) is taken, but estimates have been made from time to time using available data. The next table shows for each State and for Australia as a whole the trend in that section of wage and salary earning employment which it is possible to estimate monthly. Figures are shown as at June, 1933 (Census) and July, 1939 (based on National Register). From July, 1941 (commencement of Pay-roll Tax returns) the estimates are available for each month, and the table shows the level at June of the years 1943 and 1945 to 1949.

WAGE AND SALARY EARNERS IN EMPLOYMENT.

(*Excluding Rural Wage Earners, Female Domestics in Private Homes, and Persons on Paid Strength of Defence Forces.*)

('000.)

Year and Month.	New South Wales.	Vic-toria.	Queens-land.	South Aus-tralia.	Western Aus-tralia.	Tas-manian.	Aus-tralia (a)
MALES.							
1933—June	380.6	288.6	139.8	80.5	70.1	29.0	992.0
1939—July	529.9	357.5	172.8	106.7	82.9	37.4	1,293.1
1943—June	525.1	355.2	167.3	110.6	70.4	36.9	1,273.2
1945—June (b) ..	534.1	359.1	168.7	109.8	75.6	39.5	1,294.2
1946—June (c) ..	618.5	417.9	192.4	129.6	93.9	46.9	1,506.5
1947—June (c) ..	671.8	452.6	220.2	140.9	103.9	51.1	1,649.4
1948—June (c) ..	702.3	473.3	232.6	149.0	109.2	54.5	1,730.9
1949—June (c) (d)	705.5	489.9	240.3	155.6	113.0	56.2	1,772.1
FEMALES.							
1933—June	125.8	118.2	40.5	26.0	20.6	9.1	340.8
1939—July	168.0	142.9	53.2	34.0	26.2	11.6	437.1
1943—June	254.4	205.4	74.1	52.9	35.5	16.7	640.7
1945—June (b) ..	247.7	193.8	74.9	48.8	35.6	16.7	619.5
1946—June (c) ..	242.3	183.7	71.2	45.8	34.5	16.6	596.0
1947—June (c) ..	252.1	190.5	74.5	48.0	35.6	16.9	619.6
1948—June (c) ..	261.9	196.7	77.9	50.1	37.0	18.0	644.0
1949—June (c) (d)	263.8	202.8	80.0	52.1	37.9	18.6	657.9
PERSONS.							
1933—June	506.4	406.8	180.3	106.5	90.7	38.1	1,332.8
1939—July	697.9	500.4	226.0	140.7	109.1	49.0	1,730.2
1943—June	779.5	560.6	241.4	163.5	105.9	53.6	1,913.9
1945—June (b) ..	781.8	552.9	243.6	158.6	111.2	56.2	1,913.7
1946—June (c) ..	860.8	601.6	263.6	175.4	128.4	63.5	2,102.5
1947—June (c) ..	923.9	643.1	294.7	188.9	139.5	68.0	2,269.0
1948—June (c) ..	964.2	670.0	310.5	199.1	146.2	72.5	2,374.9
1949—June (c) (d)	969.3	692.7	320.3	207.7	150.9	74.8	2,430.0

(a) Includes Australian Capital Territory and Northern Territory. (b) 1st June, 1945 (Occupation Survey). (c) Subject to revision. (d) Australia-wide black coal strike commenced 27th June, 1949.

Estimates for recent months for Australia, corresponding to the foregoing, together with details for certain industrial groups, are published regularly in the *Monthly Review of Business Statistics* and the *Monthly Bulletin of Employment Statistics*.

(ii) *Industrial Groups.* The following table shows the total male and female wage and salary earners in employment (excluding employees in rural industry and female private domestics) subdivided to show the extent of employment provided by Governmental authorities and by private employers respectively. Some principal industrial groups included in the total are shown separately and include both Governmental and private employees, except in the case of retail trade, where there are no Governmental employees.

WAGE AND SALARY EARNERS IN EMPLOYMENT, INDUSTRIAL GROUPS : AUSTRALIA.

(*Excluding Rural Wage Earners, Female Domestics in Private Homes, and Persons on Paid Strength of Defence Forces.*)

(*000.)

Year and Month.	Total Employment.			Employment in Certain Industrial Groups.					
	Governmental. (a)	Private Employers.	Total.	Mining and Quarrying.	Factories.	Transport and Communication.	Retail Trade.	Other Commerce and Finance.	
MALES.									
1933—June ..	262.2	729.8	992.0	36.3	251.7	164.4	212.2		
1939—July ..	349.8	943.3	1,293.1	52.2	391.5	185.9	259.7		
1943—June ..	413.3	859.9	1,273.2	15.2	520.7	195.7	71.7	89.3	
1945—June (b)	399.9	894.3	1,294.2	43.4	514.5	209.6	76.3	96.5	
1946—June (c)	435.0	1,071.5	1,506.5	48.8	558.4	237.8	103.2	133.4	
1947—June (c)	472.0	1,177.4	1,649.4	51.0	593.2	256.4	116.0	151.9	
1948—June (c)	494.0	1,236.9	1,730.9	52.7	625.0	269.9	123.3	161.7	
1949—June (c) (d)	522.7	1,249.4	1,772.1	49.2	623.3	280.8	125.6	169.3	
FEMALES.									
1933—June ..	46.5	294.3	340.8	0.2	103.1	11.1	87.3		
1939—July ..	55.2	381.9	437.1	0.3	148.2	12.6	114.9		
1943—June ..	135.9	504.8	640.7	0.6	228.6	34.6	98.5	52.6	
1945—June (b)	125.4	494.1	619.5	0.4	206.3	36.5	95.9	52.5	
1946—June (c)	94.0	502.0	596.0	0.5	192.1	32.4	99.6	50.8	
1947—June (c)	92.1	527.5	619.6	0.5	199.9	32.4	104.0	53.0	
1948—June (c)	94.9	549.1	644.0	0.6	208.0	35.0	109.3	56.9	
1949—June (c) (d)	100.2	557.7	657.9	0.7	210.3	37.2	110.7	59.8	
PERSONS.									
1933—June ..	308.7	1,024.1	1,332.8	36.5	354.8	175.5	299.5		
1939—July ..	405.0	1,325.2	1,730.2	52.5	539.7	198.5	374.6		
1943—June ..	549.2	1,364.7	1,913.9	45.8	749.3	230.3	170.2	141.9	
1945—June (b)	525.3	1,388.4	1,913.7	43.8	720.8	246.1	172.2	149.0	
1946—June (c)	529.0	1,573.5	2,102.5	49.3	750.5	270.2	202.8	184.2	
1947—June (c)	564.1	1,704.9	2,269.0	51.5	793.1	288.8	220.0	204.9	
1948—June (c)	588.9	1,786.0	2,374.9	53.3	833.0	304.9	232.6	218.6	
1949—June (c) (d)	622.9	1,807.1	2,430.0	49.9	833.6	318.0	236.3	229.1	

(a) Includes employees of Australian Government Authorities (Commonwealth, State and Local) and of Allied Governments. (b) 1st June, 1945 (Occupation Survey). (c) Subject to revision.

(d) Australian-wide black coal strike commenced 27th June, 1949.

(iii) *Factories.* Actual mid-monthly factory employment derived from the results of annual factory censuses is published in the *Production Bulletin* issued by this Bureau. Estimated employment in each State in later months, subject to revision, may be

obtained from the *Monthly Review of Business Statistics* and the *Monthly Bulletin of Employment Statistics*. Additional tables regarding employment in factories may be found in Chapter XXIV. "Manufacturing Industry".

An index of factory employment in Australia, published in the *Monthly Review of Business Statistics*, shows that in 1948-49 factory employment was 60 per cent. higher than the average employment for the three years ended June, 1939.

3. **Index of Employment in Retail Stores.**—Indexes for Australia and each State are published in the *Monthly Review of Business Statistics* and are based on Pay-roll Tax returns, which commenced in July, 1941.

The index shows that in Australia in June, 1949, employment in retail stores was 24.4 per cent. higher than in July, 1941.

4. **Seasonal Employment in Australia.**—An investigation concerning the extent of seasonal employment in Australia was made during 1928 and the results were published in the *Official Year Book*, No. 22, and in *Labour Report*, No. 19.

§ 2. Unemployment.

1. **Total Persons Unemployed.**—The total number of persons unemployed has been recorded only at the dates of the various censuses. The Census records include all persons who state that they are unemployed, and distinguish between unemployment on account of sickness, accident, scarcity of work, industrial dispute, and all other causes combined. The following table sets out the number of unemployed at the Censuses of 1911, 1921, 1933 and 1947, the National Register, 1939, and the Occupation Survey, 1945. The percentage which the unemployed bore at each time to all wage and salary earners of the same sex, comprising those estimated to be in employment and those unemployed is also shown.

UNEMPLOYMENT (ALL CAUSES): AUSTRALIA.

Year and Month.	Wage and Salary Earners Unemployed.			Percentage of Wage and Salary Earners Unemployed.		
	Males.	Females.	Total.	Males.	Females.	Total.
	'000.	'000.	'000.	%	%	%
1911—April (Census)	48.0	8.3	56.3	4.3	2.7	4.0
1921—April ..	139.4	21.5	160.9	10.7	5.7	9.6
1933—June (a) ..	460.2	103.1	563.3	27.9	19.1	25.8
1939—July (b) ..	264.0	34.0	298.0	15.0	5.7	12.6
1945—June (c) ..	39.9	16.2	56.1	2.7	2.3	2.6
1947—June (d) ..	66.6	10.9	83.5	3.7	2.5	3.4

(a) The figures shown for 1933 are in excess of those actually recorded at the Census through an allowance having been made for a number of youths and girls who would normally have been wage and salary earners, but who, on account of the economic depression, having never been employed, were not classed as wage and salary earners. (b) Derived from National Register, 1939. (c) Derived from Occupation Survey, 1945. (d) Persons in the work force who were not at work at the time of the Census.

The estimates and percentages of unemployment given above for periods subsequent to the Census of 1933 should be interpreted in conjunction with the notes below.

The estimates for 1939 were based on the National Register, which covered males aged 18-64 years, and data available from other sources. Owing to the use on the Occupation Survey (1945) card of the definition "a person normally working for wages but without a job on 1st June", it appears that the 1945 figures exclude some persons who were temporarily absent from their jobs at the date of the survey.

The proportion of wage earners unemployed in July, 1939, immediately prior to the 1939-45 War, was estimated at approximately 12½ per cent. In July, 1941, it was about 4 per cent. and by June, 1943, under conditions of intensive mobilization of manpower for war purposes involuntary unemployment was practically nil.

Of the numbers at the 1947 Census shown above 25.6 per cent. were not at work owing to sickness or accident and 26.6 per cent. stated that they were resting. Of the latter approximately half said they expected to resumé their former jobs.

2. **Unemployment of Members of Trade Unions.**—(i) *General.* The particulars given in the following tables are based upon information furnished by the secretaries of trade unions. The membership of the unions furnishing regular reports exceeds 770,000, consisting predominantly of males and representing about 54 per cent. of the total trade union membership, and between 25 and 30 per cent. of all wage and salary earners. Unemployment returns are not collected from unions whose members are in permanent employment, such as railway and tramway employees, and public servants, or from unions whose members are casually employed (wharf labourers, etc.). Very few of the unions pay unemployment benefit, but the majority of the larger organizations have permanent secretaries and organizers who are closely in touch with the members and with the state of trade within their particular industries. In many cases unemployment registers are kept, and provision is made in the rules for payment of reduced subscriptions by members out of work. Seasonal fluctuations in unemployment have been provided for by collecting returns quarterly since 1st January, 1913. The quarterly figures relate to persons who were out of work for three days or more during a specified week in each quarter: they include persons out of work through sickness but exclude persons out of work through strikes and lock-outs, except those outside the industry who are indirectly affected. The yearly figures quoted represent the average of the four quarters.

The value of the percentages of unemployment derived from trade union returns is in the indication they give of the trend of unemployment among trade unionists as reported by secretaries of trade unions.

(ii) *Summary for Australia, 1939 to 1948.* The following table gives a summary for Australia for the years 1939 and 1944 to 1948 and quarterly for the years 1939 and 1946 to 1948. Particulars of unemployment percentages at intervals since 1911 will be found on page 460 :—

UNEMPLOYMENT OF MEMBERS OF TRADE UNIONS : AUSTRALIA.

Period.			Unions.	Membership.	Unemployed.	
					Number.	Percentage.
1939	Year	.. ..	396	476,918	45,967	9.7
1944	"	.. ..	380	681,684	8,073	1.2
1945	"	.. ..	388	673,750	7,864	1.2
1946	"	.. ..	383	672,121	9,125	1.4
1947	"	.. ..	381	718,096	8,432	1.2
1948	"	.. ..	380	761,104	6,533	0.9
1939	March Quarter	.. ..	395	474,277	45,545	9.6
	June "	.. ..	398	477,149	45,183	9.5
	September "	.. ..	397	478,000	48,888	10.2
	December "	.. ..	392	478,245	44,253	9.3
1946	March "	.. ..	385	662,296	9,062	1.4
	June "	.. ..	385	661,432	8,757	1.3
	September "	.. ..	381	672,209	9,212	1.4
	December "	.. ..	381	692,546	9,468	1.4
1947	March "	.. ..	381	699,155	9,880	1.4
	June "	.. ..	381	713,155	9,240	1.3
	September "	.. ..	381	725,286	7,970	1.1
	December "	.. ..	381	734,489	6,637	0.9
1948	March "	.. ..	381	744,901	6,484	0.9
	June "	.. ..	380	752,222	6,549	0.9
	September "	.. ..	380	769,959	6,813	0.9
	December "	.. ..	380	777,332	6,287	0.8

NOTE.—Similar figures for each of the four quarters of the years since 1912 will be found in the *Labour Reports*. The quarterly figures show the number of persons who were out of work for three days or more during a specified week in each quarter, and the annual figures, the average of the four quarters, the returns do not include persons out of work through strikes or lock-outs, except those outside the industry concerned who are indirectly affected.

The highest percentage of unemployed yet recorded (30.0) was reached in the quarter ended June, 1932.

(iii) *Australia, Industrial Groups, 1947 and 1948.* Below are shown the percentages unemployed in industrial groups. Industries or occupations in which employment is stable, such as railways, and those which are subject to exceptional fluctuations, such as wharf labour, agricultural, pastoral, etc., are not included. Other occupations—domestic, hotel employees, etc.—are included in the "Other and Miscellaneous" group, as their returns are not sufficiently representative:—

UNEMPLOYMENT OF MEMBERS OF TRADE UNIONS IN INDUSTRIAL GROUPS: AUSTRALIA.

Industrial Group.	Unions Reporting.				Unemployed.			
	Number.		Members.		Number.		Percentage.	
	1947.	1948.	1947.	1948.	1947.	1948.	1947.	1948.
Manufacturing—								
I. Wood, Furniture, etc. . .	16	16	23,014	24,945	132	85	0.6	0.3
II. Engineering, Metal Works, etc. . .	58	58	188,195	198,570	1,167	616	0.6	0.3
III. Food, Drink, Tobacco, etc. . .	54	54	44,355	47,673	1,231	992	2.8	2.1
IV. Clothing, Textiles, etc. . .	22	22	67,699	73,682	664	485	1.0	0.7
V. Books, Printing, etc. . .	12	12	28,129	28,472	67	44	0.2	0.2
VI. Other Manufacturing . .	62	62	51,759	56,326	1,061	961	2.0	1.7
VII. Building . .	46	46	68,868	78,702	1,141	877	1.7	1.1
VIII. Mining, Quarrying, etc. . .	21	21	29,010	27,636	668	830	2.3	3.0
X. Land Transport other than Railway and Tramway Services . .	13	13	30,845	35,340	651	415	2.1	1.2
IX., XI., XII., XIII., and XIV. Other and Miscellaneous . .	77	76	186,222	189,668	1,650	1,228	0.9	0.6
All Groups	381	380	718,096	761,104	8,432	6,533	1.2	0.9

(iv) *States, 1947 and 1948.* In making interstate comparisons of unemployment percentages, allowances must be made for the circumstance that the industries included in the returns from trade unions are not quite identical in the various States, and that for some States the returns are a more representative sample than for others. The State percentages shown below, therefore, should not be read as indicating the relative degree of unemployment amongst unionists in the individual States but as an indication of the trend of unemployment as reported by the trade unions.

UNEMPLOYMENT OF MEMBERS OF TRADE UNIONS.

State.	Unions Reporting.				Unemployed.			
	Number.		Members.		Number.		Percentage.	
	1947.	1948.	1947.	1948.	1947.	1948.	1947.	1948.
New South Wales	109	109	301,413	320,178	3,840	3,116	1.3	1.0
Victoria	74	74	204,499	212,831	2,423	1,762	1.2	0.8
Queensland	45	44	92,476	97,843	683	423	0.7	0.4
South Australia	54	54	62,345	69,390	620	734	1.0	1.1
Western Australia	65	65	41,347	43,956	492	381	1.2	0.9
Tasmania	34	34	16,016	16,906	374	117	2.3	0.7
Australia	381	380	718,096	761,104	8,432	6,533	1.2	0.9

(v) *States, 1939 to 1948.* The following table gives the percentages in each State for 1939 and from 1944 to 1948 :—

UNEMPLOYMENT OF MEMBERS OF TRADE UNIONS : PERCENTAGES.
(Per cent.)

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1939 Year	11.0	10.4	5.9	9.3	7.1	8.1	9.7
1944 "	1.6	0.8	0.7	1.0	1.5	0.8	1.2
1945 "	1.5	0.9	0.7	1.3	1.2	1.0	1.2
1946 "	1.5	1.2	0.9	1.4	1.5	2.0	1.4
1947 "	1.3	1.2	0.7	1.0	1.2	2.3	1.2
1948 "	1.0	0.8	0.4	1.1	0.9	0.7	0.9
1939 March Quarter	10.6	10.8	6.1	9.3	7.3	7.6	9.6
June "	10.6	10.4	5.7	9.5	6.2	9.4	9.5
Sept. "	11.6	11.2	5.8	9.4	8.2	8.3	10.2
Dec. "	11.1	9.0	5.8	9.1	6.6	7.1	9.3
1946 March "	1.5	1.3	0.8	1.6	1.5	1.7	1.4
June "	1.6	1.1	0.9	1.4	1.6	1.6	1.3
Sept. "	1.5	1.3	0.8	1.3	1.5	2.3	1.4
Dec. "	1.5	1.3	1.0	1.1	1.6	2.3	1.4
1947 March "	1.5	1.6	0.8	1.1	1.4	2.2	1.4
June "	1.4	1.1	0.9	1.0	1.1	2.4	1.2
Sept. "	1.1	1.2	0.8	1.0	1.1	2.5	1.1
Dec. "	1.0	0.8	0.4	0.8	1.1	2.3	0.9
1948 March "	1.0	0.8	0.5	0.9	1.0	0.5	0.9
June "	1.0	0.8	0.5	1.0	1.0	0.5	0.9
Sept. "	0.9	1.0	0.4	1.2	0.8	0.7	0.9
Dec. "	0.9	0.7	0.3	1.1	0.7	1.0	0.8

3. **Special Legislation for the Relief of Unemployment.**—The position in regard to unemployment in Australia became so serious during 1930 that the usual methods of providing funds for relief works and sustenance were found to be inadequate. The cessation of loans, and the general depression in industry and business, due mainly to the decline in the prices of primary products, brought about an economic crisis in all States. The number of persons thrown out of work increased rapidly with little prospect of conditions improving during the immediate future. The Commonwealth and State Governments realized that special action was necessary to provide additional funds to relieve the distress caused by continued unemployment, as the money ordinarily available was not sufficient to meet the abnormal conditions.

Special grants to the States were made by the Commonwealth Government, while special legislation relating to the relief of unemployment was enacted in practically all the States. In New South Wales, Victoria and Queensland, the Acts provided for special taxation for the purpose of creating funds for relief works and sustenance for the unemployed. The funds necessary for the relief of unemployment in South Australia, Western Australia and Tasmania were provided from revenue.

Further references to the special legislation relating to unemployment, rates of tax and sustenance payments will be found in *Labour Reports*, Nos. 22 to 31.

§ 3. Commonwealth Employment Service.

The Commonwealth Employment Service was established under Section 47 of the Re-establishment and Employment Act of 1945, and under the Social Services Legislation Declaratory Act 1947.

The principal function of this Service, as set out in Section 48 of the first-mentioned Act, is to provide services and facilities in relation to employment for the benefit of persons seeking to become employed, to change employment, or to engage labour, and

to provide facilities to assist in bringing about and maintaining a high and stable level of employment throughout the Commonwealth. The Act also gives the Service a number of specific functions in relation to the re-establishment of ex-servicemen and war workers.

The Service also assists in the administration of the Unemployment and Sickness Benefits, provided under the Social Services Consolidation Act 1947, as well as the Re-Employment Allowance, provided under the Re-Establishment and Employment Act for certain classes of discharged members of the Forces. All persons who wish to claim unemployment benefits or re-employment allowances must register with their residential Employment Office which is responsible for checking the claim and arranging for payment of benefit, if appropriate, and if no suitable employment can be offered to the applicant.

The Service functions within the Employment Division of the Department of Labour and National Service, and is under the control of a Director of Employment. It functions on a decentralized basis. The Central Office is in Sydney, and there are State Head Offices in each of the capital cities, with 154 District Employment Offices in suburban and the larger provincial centres, and with some 500 agents in the smaller country centres who are responsible to the various District Employment Offices. The District Offices are distributed as follows :—New South Wales, 61 ; Victoria, 38 ; Queensland, 23 ; South Australia, 13 ; Western Australia, 14 ; Tasmania, 5.

The Service completed its third year of operation in May, 1949, and monthly average statistics of the principal items of business transacted during the year ended April, 1949, were as follows :—applicants for employment—new registrations 33,417, referred to employers 30,760, placed in employment 21,248 ; vacancies—new notifications 38,524, unfilled at end of month 105,574 ; persons receiving advice or information 33,936 ; and discharges (ex-Service) dealt with 1,272.

§ 4. Industrial Disputes.

1. **General.**—Information with regard to the collection of particulars and the methods of tabulation of industrial disputes involving stoppage of work are given in previous issues of the Official Year Book, and also in the annual *Labour Reports* of this Bureau.

In annual tabulations particulars are included of all disputes which either commenced or were current during the year under review. As regards "number of disputes", "establishments involved", and "workpeople involved", therefore, duplication will take place in respect of those disputes which started in and were unsettled at the end of a preceding year ; the number involved will, however, be indicated in a footnote, to permit of due allowance being made in any calculations made from the tables. There were no disputes recorded in 1948 which started in and were unsettled at the end of 1947.

2. **Industrial Disputes Involving Stoppage of Work, Classified in Industrial Groups, 1948.**—The following table gives particulars of industrial disputes which either commenced or were current during 1948, classified according to industrial groups. Figures for 1947 may be found in *Labour Report*, 1947, No. 36, page 124.

INDUSTRIAL DISPUTES IN INDUSTRIAL GROUPS, 1948.

Class.	Industrial Group.	Number.	Establishments In- volved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly	Indirectly (a)	Total.		
NEW SOUTH WALES.								
II.	Engineering, metal works, etc.	23	25	4,287	1,605	5,892	62,069	£ 89,818
III.	Food, drink, etc.	14	75	5,655	..	5,655	26,167	41,173
IV.	Clothing, textiles, etc.	2	2	128	..	128	168	190
V.	Books, printing, etc.	2	2	190	..	190	950	1,167
VI.	Other manufacturing	5	5	2,130	..	2,130	5,719	9,810
VII.	Building	6	6	1,613	258	1,871	3,352	6,066
VIII.	(a) Coal-mining	969	1,306	192,497	5,163	197,660	468,058	809,373
	(b) Other mining, quarries, etc.	1	1	400	..	400	22,400	44,800
IX.	Railway and tramway services	15	15	2,349	..	2,349	5,205	7,987
X.	Other land transport	5	354	6,413	..	6,413	7,486	12,504
XI.	Shipping, wharf labour, etc.	18	20	18,110	10	18,120	38,316	65,955
XII.	Pastoral, agricultural, etc.	2	2	179	..	179	681	980
XIII.	Domestic, hotels, etc.	1	1	37	..	37	37	34
XIV.	Miscellaneous	8	18	1,485	..	1,485	4,353	6,083
	Total	1,071	1,832	235,473	7,036	242,509	644,901	1,155,940
VICTORIA.								
II.	Engineering, metal works, etc.	3	3	221	..	221	1,503	2,388
III.	Food, drink, etc.	2	10	1,340	..	1,340	43,260	75,635
V.	Books, printing, etc.	1	12	200	..	200	4,400	8,000
VI.	Other manufacturing	2	2	376	..	376	7,896	9,100
VII.	Building	2	2	47	..	47	632	1,245
VIII.	(a) Coal-mining	1	1	52	..	52	936	2,000
IX.	Railway and Tramway services	2	2	32,763	..	32,763	73,551	102,350
XI.	Shipping, wharf labour, etc.	4	42	5,850	..	5,850	22,800	31,930
XIV.	Miscellaneous	4	8	885	155	1,040	4,835	7,986
	Total	21	82	41,734	155	41,889	159,903	240,634
QUEENSLAND.								
VIII.	(b) Other mining, quarries, etc.	1	1	960	..	960	9,600	16,132
JX.	Railway and tramway services	1	1	8,426	7,731	16,157	727,005	909,001
XI.	Shipping, wharf labour, etc.	6	23	4,271	..	4,271	78,299	117,811
XIV.	Miscellaneous	2	2	77	66	143	143	265
	Total	12	27	13,734	7,797	21,531	815,107	833,269
SOUTH AUSTRALIA.								
II.	Engineering, metal works, etc.	1	1	23	..	23	23	31
III.	Food, drink, etc.	3	3	982	..	982	3,836	5,396
VII.	Building	4	4	486	..	486	5,283	8,160
IX.	Railway and tramway services	3	3	2,450	980	3,430	5,230	6,870
XI.	Shipping, wharf labour, etc.	8	15	1,881	156	2,037	15,375	25,972
XIV.	Miscellaneous	2	2	69	..	69	517	769
	Total	21	28	5,891	1,136	7,027	30,264	47,138
WESTERN AUSTRALIA.								
III.	Food, drink, etc.	1	1	10	..	10	100	200
VIII.	(a) Coal-mining	4	5	1,137	..	1,137	5,577	11,154
XI.	Shipping, wharf labour, etc.	3	19	965	..	965	1,671	3,342
XIV.	Miscellaneous	1	1	244	..	244	488	600
	Total	9	26	2,356	..	2,356	7,836	15,296
TASMANIA.								
III.	Food, drink, etc.	1	1	200	..	200	18	40
VII.	Building	1	1	208	..	208	832	1,248
XI.	Shipping, wharf labour, etc.	1	2	40	..	40	80	145
XIV.	Miscellaneous	1	1	20	..	20	20	40
	Total	4	5	468	..	468	950	1,473
NORTHERN TERRITORY.								
XIV.	Miscellaneous	3	82	1,369	..	1,369	3,665	5,364
AUSTRALIA.								
II.	Engineering, metal works, etc.	27	29	4,531	1,605	6,136	63,595	92,137
III.	Food, drink, etc.	21	90	8,187	..	8,187	73,381	122,444
IV.	Clothing, textiles, etc.	2	2	128	..	128	168	190
V.	Books, printing, etc.	7	14	390	..	390	5,350	9,167
VI.	Other manufacturing	7	7	2,506	..	2,506	13,615	18,910
VII.	Building	13	13	2,354	258	2,612	10,099	16,719
VIII.	(a) Coal-mining	974	1,312	193,686	5,163	198,849	474,571	882,527
	(b) Other mining, quarries, etc.	2	2	1,360	..	1,360	32,000	60,932
IX.	Railway and tramway services	21	21	45,988	8,711	54,699	811,051	816,208
X.	Other land transport	5	354	6,413	..	6,413	7,486	12,504
XI.	Shipping, wharf labour, etc.	42	121	31,117	166	31,283	156,631	245,155
XII.	Pastoral, agricultural, etc.	2	2	179	..	179	681	980
XIII.	Domestic, hotels, etc.	1	1	37	..	37	37	34
XIV.	Miscellaneous	21	114	4,149	221	4,370	14,021	21,500
	Total	1,141	2,082	301,025	16,124	317,149	1,662,686	2,299,114

(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

3. Industrial Disputes, Australia, 1939, 1944 to 1948.—The following table gives particulars of the number of industrial disputes, the number of workpeople involved, and the losses in working days and wages caused by disputes which either commenced or were current during each of the years 1939 and 1944 to 1948, classified according to industrial groups.

Satisfactory comparisons of the frequency of industrial disputes in classified industries can be made only after omitting those which are recorded for coal-mining (Group VIII. (a)). For 1913 the proportion of disputes in the mining industry represented practically 50 per cent. of the total number recorded. In subsequent years the proportion remained high, ranging from 45 per cent. in 1917 and 1918 to 83 and 85 in 1947 and 1948 respectively. In the five years 1944 to 1948 working days lost through dislocations involving workpeople engaged in coal-mining amounted to 2,183,578, representing 27 per cent. of the total loss of working days during the period :—

INDUSTRIAL DISPUTES : AUSTRALIA.

Year.	Manu- facturing. (Groups I. to VI.)	Building. (Group VII.)	Mining. (Group VIII.)		Transport, Land and Sea. (Groups IX. to XI.)	Miscel- laneous. (Groups XII. to XIV.)	ALL GROUPS.
			(a) Coal- mining.	(b) Other Mining, etc.			
			NUMBER.				
1939..	20	3	362	4	6	21	416
1944..	199	11	660	8	40	23	941
1945..	159	3	693	4	74	12	945
1946..	92	6	684	3	71	13	869
1947..	69	16	818	1	69	9	982
1948..	60	13	974	2	68	24	1,141

WORKPEOPLE INVOLVED.

1939..	8,818	57	137,792	900	2,017	3,246	152,830
1944..	65,629	1,494	158,838	6,452	36,473	7,472	276,358
1945..	56,833	1,181	194,806	2,072	59,032	2,844	315,938
1946..	55,225	554	163,954	669	126,378	1,768	348,548
1947..	35,475	39,114	192,390	500	58,483	1,175	327,137
1948..	17,347	2,612	198,849	1,360	92,395	4,586	317,149

WORKING DAYS LOST.

1939..	108,709	563	291,067	3,805	35,016	19,994	459,154
1944..	340,604	21,204	389,582	60,486	74,913	25,963	912,752
1945..	1,226,326	1,181	611,312	24,321	159,414	97,087	2,119,641
1946..	993,830	5,552	350,366	3,570	590,159	4,367	1,947,844
1947..	559,524	159,443	357,747	5,000	251,251	5,763	1,338,728
1948..	156,109	10,099	474,571	32,000	975,168	14,739	1,662,686

ESTIMATED LOSS IN WAGES.

(£.)

1939..	83,540	424	335,033	4,728	22,114	9,877	455,716
1944..	347,656	23,129	576,360	64,709	79,425	20,450	1,111,729
1945..	1,354,777	1,447	907,003	40,518	178,025	85,014	2,567,444
1946..	1,082,683	7,120	533,202	4,525	658,085	4,532	2,290,147
1947..	713,407	238,939	566,115	7,000	364,395	8,229	1,898,085
1948..	242,048	16,719	882,527	60,932	1,073,867	22,121	2,299,114

4. **Summary of Disputes (involving Stoppage of Work), 1939, 1944 to 1948.**—The following table gives particulars of the number of industrial disputes in each State in the years 1939 and 1944 to 1948 together with the workpeople involved, the working days lost, and the estimated loss in wages :—

INDUSTRIAL DISPUTES : SUMMARY.

State or Territory.	Year.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
				Directly.	In-directly (a).	Total.		
New South Wales	1939	386	460	139,301	9,230	148,531	410,183	£ 419,330
	1944	801	921	213,007	8,175	221,182	575,305	760,380
	1945	845	1,201	246,286	15,473	261,759	1,792,857	2,241,180
	1946	771	1,380	220,452	9,048	229,500	719,557	941,981
	1947	921	2,731	254,587	43,211	297,798	919,411	1,360,632
	1948	1,071	1,832	235,473	7,036	242,509	644,961	1,155,940
Victoria	1939	10	10	1,989	180	2,169	27,313	19,946
	1944	53	89	13,348	294	13,642	72,618	73,223
	1945	34	34	29,162	65	29,227	51,208	49,628
	1946	35	326	74,217	2,600	76,817	507,290	543,655
	1947	17	233	6,005	1,929	7,934	334,185	417,426
	1948	21	82	41,734	155	41,889	159,993	240,634
Queensland	1939	5	6	373	2	375	1,870	1,753
	1944	23	32	8,493	..	8,493	63,084	67,401
	1945	27	303	15,644	99	15,743	208,003	206,483
	1946	22	90	23,322	90	23,412	613,689	694,453
	1947	13	24	11,944	20	11,964	31,245	45,953
	1948	12	27	13,734	7,797	21,531	815,107	833,269
South Australia ..	1939	2	2	170	5	175	1,880	1,416
	1944	30	71	18,250	3,230	21,480	76,086	80,614
	1945	13	14	3,819	16	3,835	28,934	27,768
	1946	18	33	8,941	1,286	10,227	29,034	31,525
	1947	17	35	4,821	832	5,653	30,654	53,916
	1948	21	28	5,891	1,136	7,027	30,264	47,138
Western Australia	1939	7	7	1,108	145	1,253	14,100	9,578
	1944	30	75	7,161	3,867	11,028	89,984	93,001
	1945	16	25	3,158	644	3,802	32,491	35,239
	1946	11	18	2,704	3,059	6,363	69,634	68,329
	1947	7	12	1,759	7	1,766	6,070	8,622
	1948	9	26	2,356	..	2,356	7,836	15,296
Tasmania	1939	4	4	53	..	53	166	93
	1944	4	4	533	..	533	35,675	36,510
	1945	10	11	1,572	..	1,572	6,168	7,146
	1946	8	15	1,675	..	1,675	6,646	7,056
	1947	6	17	1,152	220	1,372	5,563	7,636
	1948	4	5	468	..	468	950	1,473
Northern Territory	1939	2	16	34	40	274	3,642	3,600
	1944	..	..	..	..	..	..	..
	1945	..	..	..	..	..	..	..
	1946	2	2	527	..	527	1,957	3,100
	1947	..	..	..	..	..	..	..
	1948	3	82	1,369	..	1,369	3,665	5,364
Australian Capital Territory	1939	..	..	..	..	..	..	..
	1944	..	..	..	..	..	..	..
	1945	..	..	..	..	..	..	..
	1946	2	9	27	..	27	57	46
	1947	1	6	450	200	650	2,600	3,900
	1948	..	..	..	..	..	..	..
Australia	1939	416	505	143,228	9,602	152,830	459,154	455,716
	1944	941	1,192	260,792	15,566	276,358	912,752	1,111,729
	1945	945	1,648	299,641	16,297	315,938	2,119,641	2,567,444
	1946	869	1,882	331,865	16,683	348,548	1,947,844	2,290,147
	1947	982	3,058	280,718	46,419	327,137	1,338,728	1,898,085
	1948	1,141	2,082	301,025	16,124	317,149	1,662,686	2,299,114

(a) See note to table on page 447.

Detailed information in regard to the disputes during the above-mentioned and previous years is given in the *Labour Reports* issued by this Bureau.

5. *Duration of Industrial Disputes, 1948.*—The following table gives particulars of industrial disputes during 1948 according to certain adopted limits of duration. A table giving details for 1947 may be found in *Labour Report, 1947*, No. 36, page 129.

INDUSTRIAL DISPUTES : DURATION, AUSTRALIA, 1948.

Limits of Duration.	Num- ber.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages.
		Directly.	Indirectly. (a)	Total.		
						£
1 day and less	756	182,411	5,643	188,054	188,054	333,833
2 days and more than 1 day	144	28,979	610	29,589	58,636	103,437
3 " " " 2 days	50	24,212	651	24,863	66,129	107,455
Over 3 days and less than 1 week (6 days)	81	29,992	649	30,641	140,756	256,288
1 week and less than 2 weeks	63	12,979	223	13,202	121,675	192,734
2 weeks " " 4 weeks	27	7,110	226	7,336	135,007	214,203
4 " " " 8 weeks	17	14,674	8,122	22,796	915,733	1,021,576
8 weeks and over	3	668	..	668	36,696	69,588
Total	1,141	301,025	16,124	317,149	1,662,686	2,299,114

(a) See note to table on page 447.

6. *Causes of Industrial Disputes, 1913, 1939, 1944 to 1948.*—The following table shows the principal causes of the industrial disputes which occurred in 1913, 1939 and 1944 to 1948 :—

INDUSTRIAL DISPUTES : CAUSES, AUSTRALIA.

Causes of Dispute.	1913.	1939.	1944.	1945.	1946.	1947.	1948.
NUMBER.							
1. Wages—							
(a) For increase	42	13	18	19	30	26	30
(b) Against decrease	4	4	1	2	..	4	1
(c) Other wage questions ..	31	58	134	131	112	178	153
2. Hours of Labour—							
(a) For reduction	3	12	1	2	2	2	1
(b) Other disputes re hours	7	9	16	13	14	15	11
3. Trade Unionism—							
(a) Against employment of non-unionists	8	1	13	7	1	9	1
(b) Other union questions ..	5	48	32	69	64	46	37
4. Employment of Particular Classes or Persons	44	107	230	243	205	104	153
5. Working Conditions	51	90	260	268	273	254	388
6. Sympathy	5	1	19	32	12	16	38
7. Other Causes	8	73	211	159	156	328	328
Total	208	416	941	945	869	982	1,141

INDUSTRIAL DISPUTES: CAUSES, AUSTRALIA—*continued.*

Causes of Dispute.	1913.	1939.	1944.	1945.	1946.	1947.	1948.
WORKPEOPLE INVOLVED.							
1. Wages—							
(a) For increase ..	8,633	4,384	4,440	4,929	91,423	11,666	29,898
(b) Against decrease ..	503	279	300	52	..	970	19
(c) Other wage questions ..	7,160	17,094	33,566	37,861	27,903	53,273	44,905
2. Hours of Labour—							
(a) For reduction ..	460	4,150	24	3,023	249	463	160
(b) Other disputes re hours ..	1,819	3,383	7,912	7,550	8,888	19,811	6,448
3. Trade Unionism—							
(a) Against employment of non-unionists ..	5,370	21	3,788	1,700	116	4,884	7
(b) Other union questions ..	1,418	16,030	7,091	21,954	11,970	12,134	8,069
4. Employment of Particular Classes or Persons ..	11,370	28,691	59,576	80,238	58,133	25,954	45,903
5. Working Conditions ..	10,785	28,092	73,733	63,505	95,900	64,734	65,042
6. Sympathy ..	947	2,600	11,118	22,392	10,849	30,037	18,175
7. Other Causes ..	1,758	48,106	74,810	72,734	43,117	103,211	98,523
Total ..	50,283	152,830	276,358	315,938	348,548	327,137	317,149

WORKING DAYS LOST.

1. Wages—							
(a) For increase ..	100,069	24,115	14,630	149,901	555,529	345,453	776,298
(b) Against decrease ..	9,438	4,472	450	142	..	3,548	361
(c) Other wage questions ..	78,183	67,550	124,256	191,194	72,473	166,918	185,499
2. Hours of Labour—							
(a) For reduction ..	2,774	21,636	72	153,023	15,246	1,601	320
(b) Other disputes re hours ..	15,111	10,752	30,444	11,852	63,936	116,122	52,563
3. Trade Unionism—							
(a) against employment of non-unionists ..	91,002	63	10,118	7,877	232	47,264	133
(b) Other union questions ..	32,388	52,086	29,203	168,105	47,419	48,092	34,090
4. Employment of Particular Classes or Persons ..	191,723	81,101	179,521	892,051	609,542	182,650	227,800
5. Working Conditions ..	73,562	108,409	215,546	206,798	325,686	123,976	132,811
6. Sympathy ..	24,066	2,600	81,533	149,771	95,248	34,113	110,154
7. Other Causes ..	5,212	86,370	226,979	188,927	72,533	208,991	142,657
Total ..	623,528	450,154	912,752	2,119,641	1,947,844	1,338,728	1,662,686

The main causes of industrial disputes are "Wage" questions, "Working Conditions," and "Employment of Particular Classes or Persons." In each of the years 1913 to 1925 with the exception of 1922, the number of dislocations concerning "Wages" exceeded those caused by any other question. From 1913 to 1948 the proportions varied between 19 per cent. in 1942 and 45 per cent. in 1916. Since 1925 the number of disputes concerning "Wages" has averaged about 20 per cent. of the total number for each year. The majority of the dislocations of work classified under the heading, "Employment of Particular Classes or Persons," are stoppages for the purpose of protesting against the dismissal of certain employees, who, in the opinion of their fellow-workers, have been unfairly treated or victimized. This class of dispute occurs very frequently in the coal-mining industry, and was the principal cause of industrial disturbance in most of the years from 1925 to 1942, averaging about 30 per cent. of the total number for each year during that period. Since 1942 the number of dislocations classified under the heading "Working Conditions" and "Other Causes" has increased proportionately, the percentages of the total in 1948 being 34 and 29 respectively. The number of disputes over "Trade Union" questions has averaged below 10 per cent. of the total number of disputes during the years under review. Stoppages of work concerning "Hours of Labour" increased during 1926 and 1927, but have been relatively unimportant during recent years.

The numbers of disputes concerning "Wages" were 208 in 1947 and 184 in 1948 representing 21 per cent. and 16 per cent. respectively of the total. Stoppages concerning "Employment of Particular Classes or Persons" numbered 104 in 1947 and 153 in 1948, 11 per cent. and 13 per cent. respectively of the totals, and those concerning "Working

Conditions" 254 in 1947 and 388 in 1948 or 26 per cent. and 34 per cent. respectively. Disputes classified under these three headings numbered 566 or 58 per cent. of the total dislocations during the year 1947 and 725 or 64 per cent. in 1948.

7. Results of Industrial Disputes.—The results of industrial disputes during 1939 and each of the years 1944 to 1948 are shown in the following table :—

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO RESULTS : AUSTRALIA.

Year.	Number.				Workpeople Involved.				Working Days Lost			
	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.
1939..	75	302	19	20	22,517	117,445	6,233	6,635	104,192	256,602	43,569	54,791
1944..	260	603	3	72	73,643	171,347	1,234	28,950	315,216	413,606	11,043	151,471
1945..	205	652	5	70	58,905	206,856	554	48,756	380,515	1,094,228	7,723	387,119
1946..	167	621	7	60	43,912	191,000	34,987	74,342	218,411	416,350	236,183	865,915
1947..	146	687	71	78	68,595	174,724	36,008	47,810	275,608	475,285	482,760	105,066
1948(a)	111	922	22	83	25,374	219,349	20,318	51,489	210,456	371,527	788,843	263,975

(a) The following disputes which were incomplete at 31st December, 1948 should be added to the figures above for 1948 to effect a balance with those shown in the preceding tables :—

State.	Number.	Establishments involved.	Workpeople involved.	Working Days Lost.
New South Wales	3	3	619	27,885

8. Methods of Settlement.—The following table gives a classification of the methods of settlement according to the adopted schedule :—

INDUSTRIAL DISPUTES : METHODS OF SETTLEMENT, AUSTRALIA.

Method of Settlement.	1913.	1939.	1944.	1945.	1946.	1947.	1948.(a)
NUMBER.							
Negotiation—							
Direct between employers and employees or their representatives	119	277	387	482	385	265	277
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	17	17	130	75	80	90	83
Under State Industrial Act—							
By intervention assistance, or compulsory conference ..	19	5	19	10	5	7	22
By reference to Board or Court ..	22	2	25	22	10	96	106
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	4	6	72	43	19	36	11
By filling places of workpeople on strike or locked out	13	1	..	1	3	1	1
By closing down establishment permanently	1	2	1	..	..	..	..
By other methods	13	106	304	308	344	487	638
Total	208	416	938	941	864	982	1,138

(a) See note to previous table.

INDUSTRIAL DISPUTES : METHODS OF SETTLEMENT, AUSTRALIA—*continued*.

Method of Settlement.	1913.	1939.	1944.	1945.	1946.	1947.	1948.(a)
WORKPEOPLE INVOLVED.							
Negotiation—							
Direct between employers and employees or their representatives	23,357	80,195	87,122	129,135	86,174	48,788	68,199
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	3,172	2,489	34,942	23,426	57,768	19,243	23,455
Under State Industrial Act—							
By intervention, assistance, or compulsory conference ..	6,505	4,925	12,684	7,967	724	4,774	18,568
By reference to Board or Court ..	12,774	429	10,970	11,981	6,483	66,998	29,100
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	659	3,268	27,966	20,596	10,059	23,497	19,573
By filling places of workpeople on strike or locked out	658	20	..	10	139	25	18
By closing down establishment permanently	170	178	19	..	..	..	..
By other methods	4,988	61,326	101,471	121,956	182,903	163,812	157,617
Total	50,283	152,830	275,174	315,071	344,241	327,137	316,530

WORKING DAYS LOST.

Negotiation—							
Direct between employers and employees or their representatives	94,400	245,709	176,569	745,989	265,401	126,574	163,397
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	26,335	52,943	150,431	158,452	339,481	78,332	118,582
Under State Industrial Act—							
By intervention, assistance, or compulsory conference ..	187,871	35,647	46,132	21,268	12,539	22,356	164,069
By reference to Board or Court ..	221,769	3,366	78,431	394,787	116,681	372,013	186,081
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	2,105	46,450	197,599	367,799	147,509	441,317	790,303
By filling places of workpeople on strike or locked out	14,139	20	..	110	7,552	50	56
By closing down establishment permanently	20,400	3,892	209	..	..	..	..
By other methods	56,509	71,127	241,965	381,180	847,696	298,086	212,333
Total	623,528	459,154	891,336	2,069,585	1,736,859	1,338,728	1,634,801

(a) See note to previous table.

Prior to 1947 the majority of disputes were settled by direct negotiation between employers and employees, the proportion so settled since 1913 ranging between 39 per cent. in 1942 and 78 per cent. in 1937. In 1947 and 1948, however, the majority of disputes were settled by "Other methods". The percentage settled by direct negotiations was 27 in 1947 and 24 in 1948. The proportion of dislocations settled by compulsory conferences or the intervention and assistance of officials under State or Commonwealth Arbitration Acts has varied considerably during the period under review, ranging between 3 per cent. in 1915 and 22 per cent. in 1913. The proportion was 14 per cent. in 1947 and 12 per cent. in 1948. In connexion with the comparatively large number of disputes which are classified as having been settled "By other methods", many stoppages of work occur each year, principally at collieries, but the cause of such stoppages is not officially known to the employers or their representatives. Such stoppages usually last for one day, and work is resumed without negotiations for a settlement of the trouble. In 1947 the percentage of disputes settled by "Other methods" rose to 50 while the percentage in 1948 was 56, the highest recorded for that class of settlement.

F.—ASSOCIATIONS.

§ 1. Labour Organizations.

1. *Registration.*—(i) *Under Trade Union Acts.* The benefits obtained by registering trade unions under the Trade Union Acts in force in the various States are not considered of much value, consequently the statistics of registered trade unions of employees do not accurately represent the position of unionism. Further, the returns for past years are so defective as to be practically valueless, inasmuch as no reliable indication is afforded of the numerical and financial position of the unions. Some of the registered unions fail to supply returns; this non-supply may lead to cancellation of the registration. Others have obtained the cancellation of their certificates of registration, the apparent reason being that they proposed to register under the Commonwealth Conciliation and Arbitration Act or a State Arbitration Act. In Queensland, some of the largest labour unions withdrew from registration during 1911, mainly on account of the necessity for closer restriction of their objects as set forth in their rules, consequent on legal decisions affecting trade unions. In Victoria and in South Australia very few of the existing unions are registered under the Trade Union Acts. It will be seen, therefore, that the available information under this heading is too meagre for statistical purposes.

(ii) *Under Industrial Arbitration Acts.* Information with regard to registrations of employers' associations and trade unions under the various State Industrial Arbitration Acts will be found in previous issues of the Official Year Book. The latest information available as to registrations is as follows:—New South Wales, 214 industrial unions of employers and 157 industrial unions of employees, the membership not being available in either case; Queensland, 20 industrial unions of employers with approximately 22,221 members, and 75 industrial unions of employees with approximately 227,802 members; South Australia, 37 organizations of employers with approximately 53,000 members; Western Australia, 34 organizations of employers with 1,130 members and 126 organizations of employees with approximately 72,000 members. There is no provision in the South Australian Industrial Acts for the registration of organizations of employers, and in Victoria and Tasmania, where Wages Board systems of wage fixation are in operation, organizations of employers and employees are not required to register. Registration under Commonwealth legislation began in 1906. In that and the four years following, there was but one union of employers; another was registered in 1911. The unions of employees registered in 1906 were 20, with 41,413 members. Early in 1949 the number of employers' organizations registered under the provisions of the Commonwealth Conciliation and Arbitration Act was 48. The number of unions registered early in 1949 was 163, with a membership of approximately 1,286,942 representing 90 per cent. of the total membership of all trade unions in Australia.

2. *Particulars regarding Trade Unions.*—(i) *Types.* The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be merely a branch of a British or International union. Broadly speaking, there are four distinct classes of labour organizations:—(i) the local independent; (ii) the State; (iii) the interstate; and (iv) the Australian or International; but a number of variations occur from each of these classes. The leading characteristics of each of these types are briefly outlined in *Labour Report No. 2* (pp. 7–9) issued by this Bureau.

(ii) *Number and Membership.* As already stated, the figures for trade unions registered under the Acts do not represent the position of unionism in Australia. In 1912 the Labour and Industrial Branch of the Commonwealth Bureau of Census and

Statistics was established and with the cordial co-operation of the officials of the labour organizations comprehensive figures relating to the development of organized labour are now available. The following table shows the position at the end of 1947 and 1948 :—

TRADE UNIONS : BRANCHES AND MEMBERSHIP, 1947 AND 1948.

State or Territory.	Number of Separate Unions.		Number of Branches.		Number of Members.	
	1947.	1948.	1947.	1948.	1947.	1948.
New South Wales ..	183	180	594	621	556,097	582,162
Victoria ..	137	136	386	397	337,502	363,661
Queensland ..	110	111	310	302	218,062	234,480
South Australia ..	111	115	174	178	109,288	115,764
Western Australia ..	130	129	209	206	80,672	85,875
Tasmania ..	70	77	72	80	33,175	35,742
Northern Territory ..	7	7	..	..	2,422	2,244
Australian Capital Territory ..	16	17	1	..	3,239	3,213
Total ..	764	772	1,746	1,784	1,339,457	1,423,150
Australia ..	(a) 357	(a) 318	(b) 2,153	(b) 2,238	1,339,457	1,423,150

(a) Allowing for interstate duplication. The figures represent the number of distinct organizations and interstate groups of organizations in Australia—not the total number of organizations which are practically independent and self-governing.

(b) See remarks below.

In the preceding table the number of separate unions in each State refers to the number of unions which are represented in each State, excluding branches therein, and each union is counted once only. Except in the last line, the number of branches indicates the number of branches of State head offices, which may, of course, themselves be branches of an interstate or larger organization. In taking the total number of separate unions in Australia (*see* last line but one), it is obvious that, in the case of interstate and similar unions, there will be duplication, since each such union is counted once in each State in which it has any branches. In the figures given in the last line, allowance has been made for this duplication. State branches of interstate or federated unions, as well as sub-branches within a State, are included under the heading "Branches" in the fourth and fifth columns—last line. The scheme of organization of these interstate or federated unions varies greatly in character, and the number of separate Commonwealth unions does not, therefore, fairly represent the number of practically independent organizations in Australia. In some of these unions the State organizations are bound together under a system of unification and centralized control while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. At the end of 1948 there were, therefore, 318 distinct organizations and interstate groups of organizations in Australia, having 2,238 State branches and sub-branches, and a total of 1,423,150 members.

(iii) *Classification in Industrial Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the years 1944 to 1948 compared with 1939. The number of unions specified refers to the number of different unions represented in each State and, while interstate or federated unions are counted once in each State in which they are represented, sub-branches within a State are not counted. The number of unions decreased annually from 1939 to 1946 but rose in 1947 and 1948 while membership has increased generally during the same period. Compared with 1939, membership in 1948 had increased by 55 per cent.

The only industrial group in which membership in 1948 was less than in 1939 was "Mining, Quarrying, etc."; all other groups registered increases. In 1948 increases were recorded in all groups except "Other Manufacturing", "Domestic, Hotels, etc." and "Other Miscellaneous" where decreases occurred.

TRADE UNIONS : INDUSTRIAL GROUPS, AUSTRALIA.

Industrial Groups.	1939.	1944.	1945.	1946.	1947.	1948.
NUMBER OF UNIONS.						
Manufacturing—	(a)	(a)	(a)	(a)	(a)	(a)
I. Wood, Furniture, etc. ..	17 (4)	17 (5)	17 (4)	17 (4)	17 (4)	17 (4)
II. Engineering, Metal Works, etc. ..	64 (22)	61 (22)	61 (22)	58 (22)	59 (20)	58 (17)
III. Food, Drink, Tobacco, etc. ..	72 (35)	66 (30)	66 (35)	66 (35)	66 (35)	65 (30)
IV. Clothing, Textiles, etc. ..	26 (12)	24 (12)	23 (9)	23 (9)	23 (9)	22 (7)
V. Books, Printing, etc. ..	14 (8)	14 (8)	15 (10)	15 (10)	16 (10)	18 (8)
VI. Other Manufacturing ..	71 (37)	74 (37)	68 (36)	67 (36)	68 (36)	61 (28)
VII. Building ..	48 (28)	48 (27)	48 (24)	48 (24)	48 (24)	48 (25)
VIII. Mining, Quarrying, etc. ..	16 (13)	18 (13)	17 (14)	17 (14)	17 (14)	18 (11)
IX. Railway and Tramway Services ..	51 (29)	51 (29)	50 (31)	50 (31)	50 (31)	51 (26)
X. Other Land Transport ..	13 (6)	12 (5)	12 (5)	12 (5)	12 (5)	12 (5)
XI. Shipping, etc. ..	60 (21)	51 (19)	45 (19)	45 (19)	45 (19)	43 (18)
XII. Pastoral, Agricultural, etc. ..	9 (5)	9 (5)	9 (3)	9 (3)	10 (3)	10 (3)
XIII. Domestic, Hotels, etc. ..	19 (18)	19 (17)	18 (17)	18 (17)	18 (17)	17 (14)
XIV. Miscellaneous—						
(i) Banking, Insurance and Clerical ..	33 (20)	33 (21)	33 (14)	33 (14)	33 (14)	43 (17)
(ii) Public Service ..	147 (50)	142 (49)	143 (48)	142 (48)	142 (48)	170 (48)
(iii) Retail and Wholesale ..	15 (8)	15 (8)	15 (9)	15 (9)	15 (9)	21 (8)
(iv) Municipal, Sewerage and Labouring ..	20 (11)	20 (12)	20 (11)	20 (11)	20 (11)	14 (8)
(v) Other Miscellaneous ..	124 (53)	107 (51)	107 (51)	105 (51)	105 (48)	84 (41)
Total	819 (380)	781 (370)	767 (362)	760 (362)	764 (357)	772 (318)

NUMBER OF MEMBERS.

Manufacturing—						
I. Wood, Furniture, etc. ..	27,990	29,280	30,582	31,952	35,250	36,559
II. Engineering, Metal Works, etc. ..	99,731	209,105	197,182	201,050	205,892	217,005
III. Food, Drink, Tobacco, etc. ..	80,328	75,404	75,655	80,691	84,444	90,064
IV. Clothing, Textiles, etc. ..	68,847	102,369	98,155	99,211	113,664	121,175
V. Books, Printing, etc. ..	22,303	25,127	25,483	28,492	29,012	29,668
VI. Other Manufacturing ..	52,074	84,782	57,262	63,805	65,266	63,246
VII. Building ..	45,651	64,780	71,051	78,066	82,716	93,291
VIII. Mining, Quarrying, etc. ..	48,812	40,282	38,581	42,758	44,361	45,879
IX. Railway and Tramway Services ..	105,938	124,763	125,632	128,426	128,816	137,318
X. Other Land Transport ..	19,488	21,920	27,555	29,455	31,239	34,224
XI. Shipping, etc. ..	28,760	35,936	34,150	32,417	33,008	33,546
XII. Pastoral, Agricultural, etc. ..	40,276	36,168	34,592	37,756	39,010	48,031
XIII. Domestic, Hotels, etc. ..	13,177	28,382	30,711	37,758	41,027	37,632
XIV. Miscellaneous—						
(i) Banking, Insurance and Clerical ..	30,013	76,645	84,288	79,468	83,953	87,340
(ii) Public Service ..	80,848	122,780	128,372	130,173	110,075	158,167
(iii) Retail and Wholesale ..	36,290	36,781	36,470	40,648	44,883	45,185
(iv) Municipal, Sewerage and Labouring ..	46,552	46,428	45,056	52,705	55,244	61,000
(v) Other Miscellaneous ..	50,392	57,867	59,014	67,827	74,997	73,911
Total	915,470	1,218,778	1,200,395	1,262,658	1,339,457	1,423,150

(a) Allowing for interstate duplication.

(iv) *Trade Unions : Numbers of Male and Female Members and Percentage to Total Wage and Salary Earners, Australia.* Prior to 1939 the numbers of male and female wage and salary earners (including unemployed) aged 20 years and over were estimated by increasing the numbers of such persons enumerated at the 1933 Census in ratio to the annual increases in males and females aged 20 to 64 years. Similarly, for wage and salary earners (including unemployed) under 20 years the numbers of such persons at the 1933 Census were increased in ratio to the annual increases in males and females 15 to 19 years. Further, allowance was made for (a) increase in the proportion of females

who became wage and salary earners and (b) youths and girls who were without occupation but were not recorded in the wage-earning group at the 1933 Census. While the foregoing method of estimation would produce fairly accurate results during normal times, the drastically altered conditions of employment over the period of the recent war necessitated the adoption of more direct methods. For 1939 and subsequent years, therefore, the estimates are based on data obtained largely from the National Register of July, 1939, the Pay-roll Tax returns commencing from July, 1941, the Civilian Register of June, 1943, the Occupation Survey of June, 1945 and records of Defence Forces. Figures for 1947 and subsequent years are based primarily on the results of the 1947 Census. Since 1939 the estimated numbers of wage and salary earners include (a) wage earners enlisted in the Defence Forces and (b) persons who were "not gainfully occupied" before the outbreak of war but who subsequently entered wage-earning employment, and (c) persons who in normal times would be occupied in their own businesses but undertook wage and salary earning employment during the war and post-war period.

The following table shows separately for males and females (a) the number of members of trade unions; (b) the estimated number of wage and salary earners of each sex 20 years of age and over in all professions, trades and occupations: and (c) the percentage of the former (a) on the latter (b) at the end of each year, 1944 to 1948 as compared with 1939. The estimated number of wage and salary earners includes all persons 20 years of age and over in receipt of wages or salary, as well as those unemployed, and therefore embraces a large number of adults who are not eligible for membership of any trade union, such as certain persons employed in professional occupations, as well as others who, while eligible for membership so far as the nature of their trade or occupation is concerned, do not reside in a locality which is covered by any union devoted to their particular trade or occupation. Moreover, the age at which persons are eligible for membership varies in different unions. The census results are classified in five-yearly age groups, and age 20 years is taken as approximating to the age of admission to membership. A line has also been added showing the estimated numbers of "junior" workers under 20 years of age.

TRADE UNIONS : NUMBER OF MALE AND FEMALE MEMBERS AND PERCENTAGE ON TOTAL WAGE AND SALARY EARNERS(a), AUSTRALIA.

Particulars.	1939.	1944.	1945.	1946.	1947.	1948.
MALES.						
Estimated No. of Adult Wage and Salary Earners (20 years of age and over) ..	1,507,500	1,707,400	1,714,000	1,639,100	1,604,600	1,648,800
No. of Members of Unions ..	778,336	944,777	941,297	1,013,653	1,068,492	1,148,779
Percentage of Members on Estimated Number of Adult Wage and Salary Earners ..	51.6	55.3	54.9	61.8	66.6	69.7
Junior Wage and Salary Earners (under 20)	275,600	272,600	266,000	257,900	239,300	246,200
FEMALES.						
Estimated No. of Adult Wage and Salary Earners (20 years of age and over) ..	417,600	541,000	499,000	482,000	524,700	542,600
No. of Members of Unions ..	137,134	274,001	259,098	249,005	270,965	274,371
Percentage of Members on Estimated Number of Adult Wage and Salary Earners ..	32.8	50.6	51.9	51.7	51.6	50.6
Junior Wage and Salary Earners (under 20)	187,200	222,000	219,000	211,300	175,100	181,400

(a) Includes wage earners enlisted in the defence forces or unemployed.

TRADE UNIONS: NUMBER OF MALE AND FEMALE MEMBERS AND PERCENTAGE ON TOTAL WAGE AND SALARY EARNERS(a), AUSTRALIA.—
continued.

Particulars.	1939.	1944.	1945.	1946.	1947.	1948.
TOTAL.						
Estimated No. of Adult Wage and Salary Earners (20 years of age and over) ..	1,925,100	2,248,400	2,213,000	2,121,100	2,129,300	2,191,400
No. of Members of Unions ..	915,470	1,218,778	1,200,395	1,262,658	1,339,457	1,423,150
Percentage of Members on Estimated Number of Adult Wage and Salary Earners ..	47.6	54.2	54.2	59.5	62.9	64.9
Junior Wage and Salary Earners (under 20)	462,800	494,600	485,000	469,200	414,400	427,600

(a) Includes wage earners enlisted in the defence forces or unemployed.

(v) *Interstate or Federated Trade Unions.* The following table gives particulars of the number and membership of interstate or federated unions in 1948:—

INTERSTATE OR FEDERATED TRADE UNIONS: AUSTRALIA, 1948.

Particulars.	Unions Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States. (a)	
Number of Unions ..	19	12	11	26	50	118
„ „ Members ..	46,265	36,117	121,989	286,067	759,222	1,249,660

(a) Certain unions in this group have, in addition to branches in each of the six States, branches in the Northern Territory and the Australian Capital Territory.

The number of organizations operating in two or more States increased from 72 in 1912 to 118 in 1948, and the percentage of the membership of such organizations on the total membership of all organizations rose from 65 to 83 during the same period.

3. **Central Labour Organizations.**—In each of the capital cities and in a number of industrial centres elsewhere, delegate organizations, consisting of representatives from a group of trade unions, have been established. Their revenue is raised by means of a per capita tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour or the Trades Hall Council, or the Labour Federation. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, to which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation of the central council on the local councils in the smaller industrial centres of the State, the councils in each State are, as a matter of fact, independent bodies.

A new Central Labour Organization, called the Australasian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the Trade Unions of Australia, and was founded at an All-Australian Trade Union Congress held in Melbourne in May, 1927. The Australasian Council is based on the Metropolitan Trades and Labour Councils in each State, such bodies having the right to appoint two representatives to act on the Executive of the Council. The Metropolitan Trades and Labour Councils are the branches of the Australasian Council. In addition to the representatives from the Metropolitan Councils, the Executive consists of four officers—the President, two Vice-Presidents, and a Secretary, who are elected by and from the All-Australian Trade Union Congress.

The objective of the Council is the socialization of industry, i.e., production, distribution and exchange. The methods to be adopted are—(a) The closer organization of the workers by the transformation of the Australasian Trade Union Movement from the craft to an industrial basis by the establishment of one Union in each industry; (b) the consolidation of the Australasian Labour Movement with the object of unified control, administration and action; (c) the centralized control of industrial disputes; and (d) educational propaganda among unions. The Australasian Council of Trade Unions is the first interstate body in Australia with authority to deal with industrial matters of an interstate character affecting the Trade Union movement generally. It is also the body responsible for submitting to the Commonwealth Government the names of persons suitable for selection as the Australian workers' delegate to the Annual International Labour Conference.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated therewith, in each State at the end of the year 1948:—

CENTRAL LABOUR ORGANIZATIONS : NUMBER AND UNIONS AFFILIATED, 1948.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Number of Councils	8	9	12	7	9	5	1	49
Number of Unions and Branch Unions affiliated ..	268	274	151	141	314	90	19	1,257

The figures given in the preceding table concerning the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated with the local trades councils in the several towns in which they are represented.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions whose members' interests are closely connected because of their occupations. Delegate councils of bakers, bread carters and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades, may be so classed.

§ 2. Employers' Associations.

The collection of detailed particulars in respect of Employers' Associations has now been discontinued, but particulars for the years 1922 to 1939 appear in issues of the Official Year Book prior to No. 34 and in the *Labour Reports*.

G.—COMPARATIVE INDEX-NUMBERS.

In order to show the relative movements of certain price and related data, the following table of annual and quarterly index-numbers for the six capital cities combined has been compiled with a common base 1911 = 1,000.

COMPARATIVE INDEX-NUMBERS FOR THE SIX CAPITAL CITIES COMBINED.

(Base of each Group: Weighted Average of Six Capitals 1911 = 1,000 (a).)

Period.	Retail Price Index-numbers.							Real Wages. (c)	Percentage of Unemployment among Trade Unionists.
	Food and Groceries.	Housing (4 and 5 Rooms). (b)	Food, Housing (4 and 5 Rooms) ("B" Series.)	Clothing.	Miscellaneous.	All Items of Household Expenditure ("C" Series.)	Nominal Wages, Adult Males.		
Year—									%
1911 ..	1,000	1,000	1,000	(d)1,000	(d)1,000	(d)1,000	1,000	1,000	4.7
1914 ..	1,144	1,082	1,121	1,140	1,140	1,140	1,081	948	8.3
1921 ..	1,902	1,410	1,717	1,883	1,537	1,680	1,826	1,087	11.2
1928 ..	1,761	1,743	1,755	1,507	1,537	1,675	1,963	1,172	10.8
1932 ..	1,425	1,336	1,390	1,215	1,458	1,377	1,639	1,190	20.0
1938 ..	1,584	1,540	1,568	1,253	1,463	1,488	1,799	1,209	8.7
1939 ..	1,657	1,577	1,626	1,271	1,465	1,526	1,846	1,211	9.7
1943 ..	1,855	1,595	1,749	2,177	1,766	1,876	2,309	1,231	1.1
1944 ..	1,834	1,595	1,746	2,168	1,773	1,867	2,326	1,246	1.2
1945 ..	1,849	1,595	1,746	2,155	1,767	1,868	2,339	1,252	1.2
1946 ..	1,852	1,595	1,748	2,276	1,776	1,900	2,400	1,263	1.4
1947 ..	1,967	1,597	1,816	2,367	1,825	1,971	2,598	1,318	1.2
1948 ..	2,245	1,601	1,982	2,637	1,913	2,148	2,914	1,357	0.9
Quarter—									
1939.									
March ..	1,673	1,568	1,631	1,258	1,461	1,524	1,826	1,198	9.6
June ..	1,654	1,575	1,623	1,264	1,461	1,522	1,847	1,214	9.5
September ..	1,645	1,582	1,620	1,264	1,463	1,520	1,854	1,220	10.2
December ..	1,657	1,584	1,628	1,297	1,472	1,536	1,858	1,210	9.3
1943.									
March ..	1,860	1,595	1,752	2,130	1,749	1,863	2,283	1,225	1.2
June ..	1,891	1,595	1,771	2,216	1,763	1,897	2,292	1,208	1.1
September ..	1,853	1,594	1,748	2,192	1,773	1,880	2,331	1,240	1.1
December ..	1,815	1,595	1,726	2,171	1,778	1,864	2,329	1,249	1.1
1944.									
March ..	1,824	1,595	1,731	2,167	1,775	1,864	2,322	1,246	1.0
June ..	1,834	1,595	1,737	2,160	1,773	1,865	2,322	1,245	1.4
September ..	1,852	1,595	1,748	2,166	1,772	1,873	2,327	1,242	1.2
December ..	1,827	1,595	1,733	2,180	1,770	1,867	2,332	1,249	1.2
1945.									
March ..	1,838	1,595	1,739	2,149	1,767	1,863	2,333	1,252	1.1
June ..	1,854	1,595	1,749	2,141	1,767	1,866	2,336	1,252	1.1
September ..	1,860	1,595	1,752	2,140	1,767	1,868	2,340	1,253	1.2
December ..	1,842	1,595	1,742	2,189	1,767	1,874	2,348	1,253	1.2
1946.									
March ..	1,853	1,595	1,748	2,201	1,772	1,881	2,354	1,251	1.4
June ..	1,863	1,595	1,754	2,259	1,776	1,900	2,360	1,242	1.3
September ..	1,839	1,596	1,741	2,299	1,776	1,902	2,378	1,250	1.4
December ..	1,854	1,596	1,750	2,343	1,781	1,918	2,507	1,307	1.4
1947.									
March ..	1,915	1,596	1,785	2,305	1,798	1,933	2,527	1,307	1.4
June ..	1,945	1,597	1,803	2,319	1,802	1,948	2,545	1,306	1.2
September ..	1,974	1,597	1,820	2,367	1,846	1,978	2,630	1,330	1.1
December ..	2,035	1,598	1,857	2,478	1,853	2,026	2,690	1,328	0.9
1948.									
March ..	2,128	1,599	1,912	2,511	1,874	2,071	2,781	1,343	0.9
June ..	2,197	1,600	1,953	2,600	1,900	2,121	2,854	1,346	0.9
September ..	2,278	1,601	2,001	2,688	1,935	2,175	2,970	1,306	0.9
December ..	2,378	1,602	2,060	2,748	1,944	2,225	3,050	1,371	0.8
1949.									
March ..	2,433	1,603	2,093	2,795	1,985	2,263	3,099	1,369	0.8
June ..	2,482	1,604	2,122	2,968	2,017	2,328	3,182	1,367	0.8

(a) The index-numbers given in the separate columns of the table cannot be compared with each other in order to show, for example, the relative cost of housing and food and groceries, since the cost in 1911 in each group or combination of groups is made equal to 1,000. (b) See footnote (b) on page 401. (c) Index of nominal weekly wage rates for adult males divided by "C" Series Retail Prices Index-number. (d) Taken back from true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of all Houses).

CHAPTER XII.

TRADE.

§ 1. Introductory.

Constitutional Powers of the Commonwealth in regard to Commerce.—The powers vested in the Commonwealth Parliament by the Commonwealth Constitution with respect to oversea trade and commerce will be found in Sub-section 51 (i) and Sections 86 to 95 thereof (see pp. 15 and 21-22 *ante*).

§ 2. Commonwealth Legislation affecting Oversea Trade.

1. **General.**—In previous issues of the Official Year Book brief particulars of the various Commonwealth Acts and amendments thereof affecting oversea trade are given in chronological order. The Customs Acts represent the administrative or machinery Acts under which the Department of Trade and Customs operates, while the Customs Tariff provides the statutory authority for imposing the actual rates of duties operative from time to time.

The Acts at present in force are: The Customs Act 1901-1947; Customs Tariff, 1933-1948; Customs Tariff (Canadian Preference) 1934-1948; Customs Tariff (Industries Preservation) Act 1921-1936; Customs Tariff (Newfoundland Preference) 1939; Customs Tariff (New Zealand Preference) 1933-1948; Customs Tariff (Papua and New Guinea Preference) 1936; Customs Tariff (Southern Rhodesian Preference) 1941-1948; Customs Tariff (Primage Duties) 1934; Trading with Enemy Act 1939-1947.

2. **Customs Tariffs.**—The Customs Tariff 1921-1930 provided a British Preferential Tariff, an Intermediate Tariff and a General Tariff. The Intermediate Tariff was omitted from the Customs Tariff 1933 but was restored by the Customs Tariff 1936.

"British Preferential Tariff" rates of duty apply to goods the produce or manufacture of the United Kingdom provided such goods comply with the laws and statutory regulations for the time being in force affecting the grant of British preference, and that the goods have been shipped in the United Kingdom to Australia and have not been transhipped, or, if transhipped, it is proved to the satisfaction of the Collector of Customs that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia. The benefits of the British Preferential Tariff may be extended wholly or in part to any British non-self-governing colony, British protectorate or to certain territories governed under British mandate. The benefits of the British Preferential Tariff have been extended by separate Trade Agreements to certain goods the produce of the Dominions of Canada and New Zealand and to certain goods the produce of British non-self-governing colonies.

In submitting tariff schedules to Parliament on 20th March, 1936, the Minister for Trade and Customs said: "Another new feature of the schedules is the Intermediate Tariff. It has been re-introduced to provide a convenient avenue for expressing the level of duties which the Government propose should form the basis for trade treaties. The rates proposed under the protective items of the Intermediate Tariff express, in every case, a protective level for Australian industry as well as preserving the margins required under the Ottawa Agreement." The Customs Tariff 1933-1948 provides that the Governor-General may from time to time by proclamation declare that the Intermediate Tariff shall apply from a date and time specified to goods specified in the proclamation which are the produce or manufacture of the British or foreign country specified in the proclamation. The Intermediate Tariff was brought into operation on 1st January, 1937, by Customs Proclamations Nos. 338, 342, 343 and 360, which granted intermediate rates of duty to specified goods the produce of "Proclaimed Countries." The countries proclaimed include the United Kingdom, the Dominions and Colonies in respect of goods which do not comply with the conditions prescribed for the application of a lower tariff

and most foreign countries under the terms entitling them to most-favoured-nation treatment. The United States of America was an important exception until 17th February, 1943, when Customs Proclamation No. 571 included it in the list of "Proclaimed Countries".

The "General Tariff" applies to all importations excepting :—

- (a) Goods the produce or manufacture of the United Kingdom, shipped in the United Kingdom ;
- (b) Goods the produce or manufacture of the following countries when admissible under the British Preferential Tariff or at a special rate of duty : Canada, New Zealand, Norfolk Island, Papua and New Guinea, Southern Rhodesia, and British non self-governing Colonies, British Protectorates and certain Territories governed under British mandate.
- (c) Goods admitted under the provisions of the Intermediate Tariff.

The Customs Tariff 1933-1948 provides for duties on certain goods to be deferred. Where a deferred duty on any goods is provided in the Schedule, the Minister shall refer to the Tariff Board for inquiry and report on the question whether the deferred duty should or should not operate on and after the date to which it has been deferred. The Board shall report whether the goods in respect of which the deferred duty is provided are being made or produced in Australia or will be so made or produced on, or immediately after, the date to which the duty has been deferred—(a) in reasonable quantities ; (b) of satisfactory quality ; and (c) at a reasonable price having regard, among other things, to the probable economic effect of the imposition of the deferred duty upon other industries concerned, and upon the community in general. Upon receipt of a report from the Tariff Board, the Minister may defer the duty further by notice published in the *Commonwealth Government Gazette*.

3. Preferential Tariff.—(i) *British Preference.* The Commonwealth Tariff 1908 provided Preferential Tariff rates in favour of specified goods produced or manufactured in the United Kingdom. Subsequent legislation has extended the list of articles to which these rates apply. For the purpose of preferential treatment the following goods are deemed by Section 151A of the Customs Act 1901-1947 to be the produce or manufacture of the United Kingdom provided the final process of their production or manufacture was performed in that country.

- (a) Goods which are wholly produced or wholly manufactured in the United Kingdom from materials in one or more of the following classes—
 - (i) Materials wholly produced or wholly manufactured in the United Kingdom or in Australia ;
 - (ii) Imported unmanufactured raw materials ;
 - (iii) Imported manufactured raw materials as determined by the Minister.
- (b) Goods of the factory or works cost of which not less than seventy-five per cent. is represented—
 - (i) by labour or material of the United Kingdom ; or
 - (ii) by labour or material of the United Kingdom and labour or material of Australia.
- (c) Goods of a class or kind not commercially produced or manufactured in Australia and of the factory or works cost of which not less than twenty-five per cent. or fifty per cent. if the Minister so determines is represented—
 - (i) by labour or material of the United Kingdom ; or
 - (ii) by labour or material of the United Kingdom and labour or material of Australia.

The benefits of the British Preferential Tariff have also been extended by separate Trade Agreements to certain goods the produce of the Dominions of Canada and New Zealand and by separate Tariff legislation to the Territories of Papua and New Guinea and the above-mentioned conditions apply *mutatis mutandis* to each.

At the Imperial Economic Conference held at Ottawa, Canada, during July and August, 1932, a trade agreement providing for special preferential trade conditions was made between the Governments of the United Kingdom and the Commonwealth of

Australia. A summary of the provisions of this agreement appeared in Official Year Book No. 26, pp. 868-873 and further references were made in subsequent issues of the Year Book.

The five years' currency of the agreement terminated on 19th August, 1937, but, in view of the negotiations then in progress between the Governments of the United Kingdom and the United States of America for a trade agreement, a review of the terms of the Ottawa Agreement became a matter of urgency. The United Kingdom Government at the time sought the concurrence of the Dominions in the modification of certain preferences granted under the Ottawa Agreement in order to facilitate the satisfactory conclusion of an agreement with the United States of America. As a consequence, a conference of United Kingdom and Australian Ministers was held in London early in 1938 and a joint statement setting out the result of the conference was issued by the two Governments in the form of a Memorandum of Conclusions which was published by the United Kingdom Government on 20th July, 1938. Details of the Memorandum have been published in previous issues of the Official Year Book. The full text appears on pages 479-482 of Official Year Book No. 32.

The future of the agreement and of Empire preferences generally has been discussed in connexion with the proposals for the establishment of an International Trade Organization which are referred to in paragraph 6.

(ii) *Intermediate Tariff.* The Intermediate Tariff came into operation on 1st January, 1937, in respect of a selected list of items. This list has been substantially extended from time to time but many rates have not yet been proclaimed to come into operation. Those items which have been proclaimed apply to goods from countries with which specific most-favoured-nation arrangements exist, including goods from all members of the British Commonwealth of Nations not receiving preferential Tariff treatment. They apply also to goods from certain other Foreign countries in respect of which Australia has no formal obligation to accord Intermediate Tariff treatment.

(iii) *Exchange Adjustment.* The Customs Tariff (Exchange Adjustment) Act 1933-1939 provides for adjustments in Duties of Customs consequent upon depreciation in the value of Australian currency relative to sterling. This Act came into operation on 5th October, 1933 and ceased to operate on 15th November, 1947, as a result of the Customs Tariff (Exchange Adjustment) Act Repeal Act 1948.

A summary of the provisions of the Customs Tariff (Exchange Adjustment) Act 1933-1939 is contained in previous issues of the Official Year Book.

(iv) *Papua and New Guinea Preference.* The Customs Tariff (Papua and New Guinea Preference) Act 1936 which repealed the Act of 1934 provides for Customs Preference on goods the produce of Papua and on goods the produce of the Territory of New Guinea. Imports into Australia direct from the Territory of Papua or the Territory of New Guinea, of such of the goods specified in the schedule to the Act as were produced in the Territory from which they were imported, shall, notwithstanding anything contained in the Customs Tariff 1933-1939, be free of duty. The goods specified in the schedule to the Customs Tariff (Papua and New Guinea Preference) 1936 are coffee, dried lychee fruit, various native fresh fruits, edible fungi, green and dry ginger, coco-nuts, Rangoon beans, kapok and sesame seeds, areca nuts, cocoa beans, massoi oil, nuts (edible), sago, tapioca, spices, vanilla beans, gums, pyrites, denatured spirit and tea.

4. *Primage Duty.*—From 10th July, 1930 a primage duty of 2½ per cent. ad valorem was imposed on all goods whether dutiable or not dutiable, in addition to the duties collected in accordance with the Customs Tariff 1921-1930, excepting bullion, specie, radium and certain special governmental and other imports. The rate of primage duty was subsequently increased to 4 per cent. as from 6th November, 1930.

A proclamation of 14th May, 1931 exempted certain aids to primary production, and on 11th July, 1931 a further amendment, in addition to extending the list of these goods and also exempting some minor imports from primage duty, provided for a rate of 4 per cent. ad valorem on a few other items, mainly aids to production, and increased the ad valorem rate of primage duty to 10 per cent. on all other articles imported. Amendments promulgated since 11th July, 1931 have greatly increased the list of goods exempt from primage duty.

The Customs Tariff (Primage Duties) Act 1934 imposed primage duty at rates of 4, 5, and 10 per cent. and provided for preferential treatment of certain goods admitted under the British Preferential Tariff. A proclamation of 12th December, 1934 exempted from primage duty goods the produce or manufacture of Fiji, and a proclamation of 25th September, 1935 exempted from primage duty goods the produce or manufacture of the Territories of New Guinea and Papua. Under the Customs Tariff (New Zealand Preference) Act goods the produce or manufacture of New Zealand are exempt from primage duty. Similarly under the Norfolk Island Act 1913 goods the produce or manufacture of Norfolk Island are exempt from primage duty.

Customs proclamations, which came into force on 1st January, 1937 and later dates, provide in respect of specified tariff items exemptions from, and reduced rates of 4 and 5 per cent., primage duty on imports the produce or manufacture of "Proclaimed Countries". All countries whose goods are admissible to Australia under the intermediate customs tariff rank as proclaimed countries and include the United Kingdom, the Dominions and Colonies, the United States of America (from 18th February, 1943), and most foreign countries.

Further proclamations have provided for exemption of additional tariff items from primage duty. Of proclamations of recent date, those operative from 19th November, 1947, were the principal.

5. *Trade Agreements.* (See also para. 6 following)—(i) *United Kingdom.* A reciprocal trade agreement between the United Kingdom and Australia came into force on 14th October, 1932, and is referred to briefly in paragraph 3 above. Broadly speaking, Australia secured preferences in the United Kingdom market for a wide range of Australian export commodities and in return Australia incurred obligations to the United Kingdom in respect of Tariff rates and the grant of preferences to United Kingdom goods.

(ii) *Dominion of Canada.* A reciprocal trade agreement between Canada and Australia which came into force on 1st October, 1925, was superseded by a new agreement operating from 3rd August, 1931. The basis of the new agreement was, generally, the mutual accord of British Preferential Tariff treatment. The only exceptions to this general rule were listed in the schedules to the agreement.

Australian commodities to which the British Preferential Tariff does not apply on their importation into Canada are: Butter, brandy, champagne, cheese, currants, eggs, eucalyptus oil, fresh apricots, pears, quinces, nectarines, grapes, oranges and passion fruit, dried prunes, apricots, nectarines, pears and peaches, fruit pulp, fruits in cans, gelatine, hops, rice (uncleaned), meat (fresh and canned), peanuts, raisins, sugar, tallow, veneers and wine.

Canadian commodities to which the British Preferential Tariff does not apply on their importation into Australia are: Carbide of calcium, cash registers, corsets, fish, gloves, goloshes and rubber sand boots, etc., piece goods, iron and steel tubes or pipes, printing machinery, barbed wire, paper (printing, typewriting and writing), timber, typewriters, vacuum cleaners and vehicles—motor chassis (unassembled and assembled)—and vehicle parts but not including bodies, gears, rubber tyres and tubes, storage batteries, shock absorbers, bumper bars, sparking plugs and springs.

Certain administrative provisions, including a special concession to Canada in respect of the inland freight charges to be included in the dutiable value of Canadian goods on importation into Australia, were incorporated in the agreement.

The Customs Tariff (Canadian Preference) Acts 1931 and 1934–1948 give effect to the agreement so far as Australia is concerned.

(iii) *Dominion of New Zealand.* A reciprocal trade agreement between New Zealand and Australia came into force on 1st December, 1933, superseding an earlier agreement of 1922. The basis of the new agreement was, generally, the mutual accord of British Preferential Tariff treatment. The only exceptions to this general rule were listed in the schedules to the agreement.

The Customs Tariff (New Zealand Preference) Act 1933 giving effect to the agreement repealed earlier acts and provides that duties on all goods specified in the schedule to the Act shall be at the rates indicated therein, and that all goods other than those

provided for in the schedule shall be subject to the rates in force under the British Preferential Tariff. An amendment to this Act in 1934 provides that, where the rate of duty upon any class of goods under the New Zealand British Preferential Tariff is less than that operating in Australia under the British Preferential rate, upon request by the New Zealand Government such goods may, after proclamation, be admitted at the lower rate. The rates of duty on goods re-exported from New Zealand (not being goods the produce or manufacture of New Zealand) and which are imported into Australia, and which if they had been imported into Australia direct from the country of origin would have been subject to the rates of duty under the British Preferential Tariff, shall be the rates of duty in force under that tariff.

The Act provides also that films produced in New Zealand by or for the Government of New Zealand for publicity purposes shall be admitted free of duty, also that cocoa beans the produce of Western Samoa shall not be subject to any higher duties than those paid on cocoa beans the produce of any British non-self-governing Colony or Protectorate or any Territory under British mandate. The provisions of the Act do not, however, apply to goods the produce of Cook Islands.

Goods the produce or manufacture of the Dominion of New Zealand are exempt from primage duty.

The conditions of preference in the Act provide that goods shall be deemed to be the produce or manufacture of New Zealand if they conform to the laws and regulations in force in Australia which apply to such goods when imported under the British Preferential Tariff (*vide* section 151A of Customs Act 1901-1947) except that goods not wholly produced or manufactured in New Zealand need not contain more than 50 per cent. of New Zealand labour and/or material in their factory or works cost, instead of 75 per cent. under the conditions of the United Kingdom preference.

(iv) *Newfoundland.* An agreement between Newfoundland and Australia which came into operation on 12th December, 1939, provided for imports of news printing paper the produce or manufacture of Newfoundland to be accorded the benefits of the British Preferential Tariff, and in return the Government of Newfoundland accorded exclusive Tariff preference to Australian butter and canned fruits imported into that country.

The agreement was approved by the Trade Agreement (Newfoundland) Act 1939, and effect was given to its provisions so far as Australia is concerned by the Customs Tariff (Newfoundland) Preference Act 1939.

Following the incorporation of Newfoundland as the tenth province of Canada as from 1st April, 1949, the Agreement with Newfoundland has lapsed and trade between Australia and Newfoundland is now subject to the Canada-Australia trade agreement.

(v) *Southern Rhodesia.* An agreement between Southern Rhodesia and Australia came into operation on 9th April, 1941.

Under the agreement the principal undertakings by the Commonwealth Government were—(a) to accord a preferential rate of ninepence per lb. lower than the British Preferential Tariff on unmanufactured tobacco from Southern Rhodesia; and (b) to admit raw asbestos and chrome at rates of duty not higher than those applicable to these products from other countries, and to admit them free of primage duty.

The Southern Rhodesian Government on its part agreed—(a) to admit free of duty a schedule of Australian goods comprising 33 items; (b) to accord specified preferential rebates ranging from 10 per cent. to 50 per cent. from the duties applicable to United Kingdom goods on a schedule of Australian goods comprising 19 items; (c) to accord British Preferential Tariff rates to a schedule of Australian goods comprising 14 items and (d) to accord similar tariff treatment to Australian wheat and wheat flour, in the event of permits being issued for importation from any other country at rates of duty lower than those accorded to Australia under the agreement.

The Trade Agreement (Southern Rhodesia) Act 1941 approved the agreement, which was given effect to so far as Australia is concerned by the Customs Tariff (Southern Rhodesia Preference) Act 1941.

(vi) *Union of South Africa.* A trade agreement between Australia and the Union of South Africa came into force as from 1st July, 1935.

This agreement provides that the products of the Union of South Africa or of the mandated territory of South-West Africa entering Australia and the products of Australia entering the Union of South Africa or the mandated territory of South-West Africa shall be subject to customs duties not higher than those imposed by the importing country on like products from the most favoured foreign nation. A reciprocal tariff arrangement under which products of Mozambique are admitted duty free to the Union of South Africa is exempt from the agreement.

The Trade Agreement (South Africa) Act 1936 approves the terms of this agreement.

(vii) *Foreign Countries.* Trade agreements between the Commonwealth Government and the Governments of Belgium, Czechoslovakia and France were in operation prior to the outbreak of war in September, 1939, but were inoperative during the war, owing to the provisions of the Trading with the Enemy Act 1939-1940. These agreements are again in full force.

The trade agreement concluded in 1938 between Australia and Switzerland continued in limited operation during the war period.

Between December, 1939 and April, 1944 the Commonwealth Government also entered into trade agreements with Brazil and Greece.

Summaries of the texts of these agreements appeared in previous issues of the Official Year Book.

6. The Charter for an International Trade Organization and the General Agreement on Tariffs and Trade.—These documents are basically the result of a series of international trade discussions which commenced in 1946 and culminated in a World Conference on Trade and Employment at Havana in 1948.

The origin of these discussions is found in the principles enunciated in Article VII. of the Mutual Aid Agreement between the Government of the United Kingdom and the United States of America, which reads as follows:—

“ In the final determination of the benefits to be provided to the United States of America by the Government of the United Kingdom in return for aid furnished under the Act of Congress of the 11th March, 1941, the terms and conditions thereof shall be such as not to burden commerce between the two countries, but to promote mutually advantageous economic relations between them and the betterment of world wide economic relations. To that end they shall include provision for agreed action by the United States of America and the United Kingdom, open to participation by all other countries of like mind, directed to the expansion, by appropriate international and domestic measures, of production, employment, and the exchange and consumption of goods, which are the material foundations of the liberty and welfare of all peoples; to the elimination of all forms of discriminatory treatment in international commerce, and to the reduction of tariffs and other trade barriers; and, in general, to the attainment of all the economic objectives set forth in the joint declaration made on the 12th August, 1941, by the President of the United States of America and the Prime Minister of the United Kingdom.”

“ At an early convenient date, conversations shall be begun between the two Governments with a view to determining, in the light of governing economic conditions, the best means of attaining the above-stated objectives by their own agreed action and of seeking the agreed action of other like-minded Governments.”

This Article is linked with the terms of the Atlantic Charter and has particular reference to Clauses 4 and 5, which state the common principles in the national policies of the United Kingdom and the United States of America in relation to trade and international economic relations. The paragraphs referred to read as follows:—

“(4) They will endeavour, with due respect to their existing obligations, to further the enjoyment by all States, great or small, victor or vanquished, of access on equal terms to trade and raw materials of the world which are needed for their economic prosperity.

(5) They desire to bring about a full collaboration between all nations in the economic field, with the object of securing for all improved labour standards, economic advancement and social security.”

The Commonwealth Government subscribed to these principles in an Exchange of Notes made on 3rd September, 1942 between the Australian Minister at Washington and the United States Secretary of State, which formed also the basis of the Australian Reciprocal Aid Agreement with the United States of America.

The first step towards the implementation of these principles in the field of international trade was taken in December, 1945, when the Government of the United States of America issued an invitation to a number of the leading trading nations of the world (including Australia) to participate in two sets of preliminary negotiations. One was designed to discuss a draft Charter prepared by the Government of the United States of America and entitled "Proposals for Expansion of World Trade and Employment." The other proposed negotiations were for the purpose of giving practical effect to the policy of expanding international trade by bringing about a series of mutually advantageous trade agreements.

The conference did not eventuate at the time fixed, but after the establishment of the United Nations Organization the first subject of negotiation (viz. the Charter) was brought under the auspices of the United Nations by the acceptance of a resolution proposed by the United States of America at the First Meeting of the Economic and Social Council in February, 1946. The Council established a Preparatory Committee to elaborate an annotated draft agenda for consideration by a World Conference on Trade and Employment. The Committee comprised the United Kingdom, the United States of America, France, Belgium, Netherlands, Luxembourg, Norway, Czechoslovakia, Lebanon, Canada, India, South Africa, New Zealand, Australia, China, Cuba, Brazil and Chile. The U.S.S.R. had been invited but did not participate.

The first meeting of the Preparatory Committee was convened for October, 1946 in London and, in July, 1946, the United States Government issued an amendment of its previous proposals in the form of a "Suggested Draft Charter for an International Trade Organization of the United Nations."

Broadly speaking, the proposals embodied in the draft aimed at implementing the principles enunciated in Article VII. of the various Mutual Aid Agreements and in the Atlantic Charter and contemplated—

- (1) The establishment of an International Trade Organization;
- (2) the modification of restrictive trade barriers; and
- (3) the development of agreed rules of conduct in regard to matters affecting international trade.

The object was to raise living standards in all the countries of the world by the promotion of a high level of employment and the expansion of world trade.

At its first meeting in London in October, 1946, the Preparatory Committee discussed generally the Articles of the Draft Charter. Various amendments were proposed and, as a result, it was necessary for the Preparatory Committee to appoint a Drafting Committee, which met in New York in January and February, 1947, and incorporated in the Draft Charter the alterations suggested at the London discussions.

The text of the Drafting Committee's revised Charter became the basis for discussion by the Preparatory Committee in its Second and Final Preparatory Session held in Geneva during May–October, 1947. The Charter as further revised during that session was laid before the World Conference on Trade and Employment, which commenced in Havana in November, 1947.

The Draft Charter considered at Havana covers a very extensive range of subjects connected with the rules and conduct of international trade. It is divided into nine chapters covering the purposes and objectives of the proposed International Trade Organization, employment and economic activity, economic development, commercial policy, restrictive business practices, intergovernmental commodity arrangements, treatment of non-members and the administrative arrangements for the organization itself.

Other features of the draft Charter from the view-point of Australia are (1) that provision is made for the preservation of the existing British Preferential Tariff System and (2) present Australian stabilization schemes for the marketing of primary produce are permitted to continue. In addition, the proposed International Trade Organization

will provide a forum for the consideration of common problems in a conciliatory spirit ; the principles of multilateral trade are in contrast to the *trading blocs* of the " thirties " and in conjunction with tariff reductions the balance of trade with the dollar area will tend to be restored by weakening restrictions on imports into the United States of America.

The Final Act of the United Nations Conference on Trade and Employment was signed in Havana by the representatives of fifty-three nations on 24th March, 1948. It was agreed that the Charter would be submitted to the Governments of the countries represented at the Conference, and the Charter provides that it must be approved by a majority of these before it comes into operation.

The Charter was considered by the Australian Parliament towards the end of 1948 and approval has been given for Australia to lodge an instrument of acceptance when a corresponding instrument has been lodged by the United Kingdom and the United States of America. These latter countries have such a predominating influence in world trade that it was considered necessary to attach such a condition to Australia's acceptance.

The measure for the United States of America to accept the Charter was introduced into the United States of America Congress in April, 1949 but it has not as yet been approved.

Towards the end of 1946 the Governments of a number of countries comprising the Preparatory Committee felt that the other discussions proposed by the United States of America in December, 1945 (*viz.* those directed at the policy of expanding international trade by bringing about a series of mutually advantageous trade agreements) were an interdependent part of the Charter negotiations. In consequence they were also brought under the auspices of the United Nations on the recommendation of the First Session of the Preparatory Committee.

As a result thereof on 10th April, 1947 (about a month prior to the resumption of the Charter discussions) the member nations of the Preparatory Committee engaged in negotiations with the object of arriving at a satisfactory basis on which the reduction of tariff barriers could be effected.

The Tariff negotiations were kept quite distinct from the Charter discussions as the aim was to bring the results into effect without necessarily awaiting the establishment of the International Trade Organization.

The results of the negotiations were incorporated in a draft General Agreement on Tariffs and Trade which was tabled in the House of Representatives on the 18th November, 1947, together with the tariff schedules implementing the tariff reductions which Australia had undertaken to afford.

A Protocol of Provisional Application provided that, upon signature by Australia, Belgium, Canada, France, Luxembourg, the Netherlands, the United Kingdom and the United States of America not later than 15th November, 1947, those countries should undertake to apply provisionally on and after 1st January, 1948—

- (1) Parts I. and III. of the Agreement,
- (2) Part II. of the Agreement to the fullest extent not inconsistent with existing legislation in their respective countries.

These conditions were satisfied and the Agreement is provisionally in force. Tariff reductions undertaken by Australia operated from the 19th November, 1947. Subsequently fifteen other countries signed the Protocol of Provisional Application and the General Agreement is now being provisionally operated by Australia, Belgium, Brazil, Burma, Canada, Ceylon, Chile, China, Cuba, Czechoslovakia, France, India, Lebanon, Luxembourg, Netherlands, New Zealand, Norway, Pakistan, Southern Rhodesia, Syria, South Africa, United Kingdom and the United States of America.

The agreement does not come definitively into force until 30 days after instruments of acceptance have been lodged by countries accounting for 85 per cent. of the total external trade of the countries signatory to the Final Act. The percentage is to be calculated in accordance with a table set out in Annex II to the Agreement. No country has yet definitively accepted the agreement, but as in the case of the Charter, Parliament has approved Australia lodging an instrument of acceptance when the United Kingdom and United States of America have done likewise.

Many of the articles of the General Agreement are identical with articles in the Charter and were only incorporated in the Agreement to prevent tariff concessions being circumvented by other measures pending the coming into force of the Charter. When the Charter comes into force Part II. of the General Agreement which contains such articles will be suspended.

If finally ratified, the Agreement will run until 1st January, 1951, but will continue thereafter unless it is specifically terminated.

The Agreement, which is in three parts, contains, briefly—

Part I. Schedules of negotiated tariff reductions and an undertaking to extend most-favoured-nation treatment to other participating countries except where existing preferences are deemed valid.

Part II. Undertakings regarding commercial policy to prevent tariff concessions being offset by other protective measures.

Rights are preserved, however, to—

- (1) Impose new duties for protective purposes except in respect of commodities where rates of duty have been bound under the general agreement;
- (2) impose import restrictions to protect the balance of payments;
- (3) take emergency action where any industry is endangered by any negotiated tariff or preference reduction.

Part III. Mainly machinery provisions.

Under the tariff negotiations associated with the Agreement concessions were offered to Australia on almost all the principal products of which Australia is an actual or potential exporter to the individual countries concerned. Generally the offers were made directly to Australia, but in some cases benefits will arise indirectly from concessions granted to third countries which are more important suppliers of the particular product. These latter benefits occur through the operation of the most-favoured-nation principle.

In April, 1949 a further series of tariff negotiations commenced at Annecy in France between the 23 Contracting Parties which are at present operating the General Agreement on Tariffs and Trade and eleven additional countries which have expressed a desire to accede to the General Agreement. These countries are:—Colombia, Denmark, Dominican Republic, Finland, Greece, Haiti, Italy, Liberia, Nicaragua, Sweden and Uruguay.

In addition, Ceylon, which, for domestic reasons, had been unable to operate concessions it negotiated at Geneva in 1947, took the opportunity of re-negotiating with certain countries including Australia.

Besides the tariff negotiations, the Contracting Parties also conducted a session to deal with matters arising out of the administration of the General Agreement on Tariffs and Trade.

7. Customs (Import Licensing) Regulations.—The Customs (Import Licensing) Regulations were promulgated and became effective on 1st December, 1939. These regulations were complementary to the National Security (Monetary Control) Regulations and the Customs (Overseas Exchange) Regulations, which were already in operation, in that the chief immediate aim of the licensing measure was to conserve resources of non-sterling exchange and, in particular, to prevent the absorption of those resources in the purchase of unessential imports to the detriment of more vital national needs. Other objectives were to enable priority in shipping space to be given to essential imports should a shortage develop and to gather information on the relative importance of particular imports to enable future restrictions (if required) to be soundly based.

However, during 1941 the deterioration of Australian sterling balances in London and changes in the general war situation made it necessary in December, 1941 to bring imports from sterling countries within the scope of the regulation. The extension of the restrictions to sterling goods was a necessary corollary to the measures adopted in Australia and throughout the British Commonwealth to divert manpower, machinery and raw materials to war production. Conservation of shipping space was also an important consideration.

With the cessation of hostilities and the improvement in London balances and in accordance with the Government policy of relaxing all forms of war-time restrictions wherever possible, a large range of goods of sterling origin was removed from control in January, 1946. In January, 1947, with the exception of a small number of goods, import licensing control was removed from all goods of United Kingdom origin. Since the cessation of hostilities, also, restrictions have been continuously modified in respect of goods from those non-sterling countries (called easy currency countries) with which the sterling area has no balance of payments difficulties, and they have now been relaxed to the extent that virtually all goods from those countries are permissible imports.

The sterling area still has balance of payments problems with a small number of non-sterling countries (the hard currency countries). Australian policy in respect of importations from these countries (the chief of which are those which comprise the dollar area) is to restrict importations to those goods which are of an essential nature and are unobtainable from sterling or easy currency sources.

8. Export Control.—(i) *General.* Powers for the normal measures of control or supervision over exports are conferred by section 112 (1) of the Customs Act and they provide for the prohibition of the exportation of arms, explosives and military and naval stores, and of any goods—

- (a) the exportation of which would be harmful to the Commonwealth ;
- (b) the prohibition of the exportation of which is necessary for the preservation of the flora or fauna of Australia ;
- (c), in order to preserve the standard and quality of Australian goods for export ;
- (d) the prohibition of the exportation of which is necessary for the protection of the revenue or the prevention of fraud or deception.

Action has been taken under these powers to prohibit the exportation of a large range of goods and these prohibitions apply at all times. They may be general, or restricted and absolute, or conditional.

In addition to these normal measures, restrictions were imposed on the exportation of goods during the war years and many have been continued in the post-war period. These restrictions provide for both monetary and commodity controls and are explained hereunder.

(ii) *Monetary Control.* As an integral part of the framework of exchange control, a control over goods exported from Australia was introduced in 1939 by the promulgation of the Customs (Overseas Exchange) Regulations which were subsequently superseded by Part IIA. of the National Security (Exchange Control) Regulations in December, 1943. The objectives were to ensure that—

- (a) The overseas funds accruing from the exportation of goods were made available to the Australian banking system ; and
- (b) payment for goods exported was made in the currency and the manner prescribed by the Commonwealth Bank of Australia.

On the conclusion of the war it was decided to continue exchange control measures and provision was made in the Banking Act 1945 to enable the introduction of the necessary regulations. On 19th December, 1946 the Banking (Foreign Exchange) Regulations were promulgated and Part III. of these regulations now authorizes the control previously exercised under Part IIA. of the National Security (Exchange Control) Regulations.

Under Regulation 16 of the Banking (Foreign Exchange) Regulations the exportation of any goods is prohibited unless a licence to export has been granted under the regulations or the goods are excepted from the application of the regulations. Provision is made for the granting of export licences subject to such terms and conditions as may be imposed. On the receipt in Australia by the Commonwealth Bank, or by a Bank acting as its agent, of advice that foreign currency has been paid to the Commonwealth Bank or to an agent of the Bank in payment for goods exported in accordance with a licence granted under the regulations, the Bank or agent of the Bank pays the licensee, or such other person as may be entitled to receive it, an amount in Australian currency equivalent to the foreign currency received.

In addition to commercial transactions, exports by private individuals are rigidly controlled and in the case of persons leaving Australia for overseas a restriction applies to the value of specified articles of jewellery and other effects of high intrinsic value which they are permitted to take with them. Their baggage is subject to the regulations and, if containing goods of the nature mentioned, may require an export licence. Any goods contained in passengers' baggage which are restricted exports under the Customs Act require to be covered by an export permit.

(iii) *Commodity Control.* For various reasons, the principal of which were—

- (a) To conserve supplies of essential commodities for Australia's requirements ;
- (b) to implement price determinations ;
- (c) to control exports of goods which are the subject of Empire Marketing Agreements ; and
- (d) to strengthen the control of the exportation of capital in the form of goods, instituted by Part III. of the Banking (Foreign Exchange) Regulations,

a large range of commodities was prohibited from exportation (unless the consent of the Minister for Trade and Customs was first obtained) by proclamation promulgated under section 112 (1A.) of the Customs Act.

These prohibitions were imposed as a war-time measure but post-war conditions have necessitated continued export control of a number of goods. However, the matter is kept under continual review to ensure that restrictions are removed as soon as conditions permit.

9. *Industries Preservation.*—The Customs Tariff (Industries Preservation) Act 1921-1936 provides that, after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry :—In the case of goods sold for export to Australia at a price less than the fair market value for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and the fair market value or the difference between the price at which the goods were sold and a reasonable price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the normal rate of freight the dumping freight duty shall be—on goods carried free—the amount payable as freight at the normal rate ; and in the case of any other goods—an amount equal to the difference between the freight paid and the freight which would have been payable at the normal rate. Special duties are also imposed in the case of goods imported from countries whose currency is depreciated. Provision is also made for the protection of the trade of the United Kingdom in the Australian market from depreciated foreign currency.

The Act provides that the Minister for Trade and Customs, after inquiry and report by the Tariff Board, may publish a notice in the *Commonwealth of Australia Gazette* specifying the goods upon which the special rates of duty under this Act shall thereupon be charged and collected.

10. *Imperial Preference in the United Kingdom.*—(i) *Preferential Tariff of the United Kingdom.* Before 1919 the United Kingdom did not accord tariff preferences to Empire countries on the limited number of revenue duties then chargeable. In that year preferential rates of duty were established on some eighteen items. Of these, the preferential rate on twelve items was to be equivalent to five-sixths of the full rate, on four to two-thirds of the full rate and on another (wine) to 50-70 per cent. of the full rate. The items so affected of interest to Australia at that time were currants, dried and preserved fruit, sugar, molasses and wine.

Preferential treatment was conditional on the goods being consigned from and grown, produced or manufactured in the British Empire. In the case of manufactured articles preference only applied where a prescribed proportion of their value was the result of labour within the British Empire. Subsequent preference arrangements have been subject to substantially similar conditions.

From 1919 to 1932 various further measures increased the preferential tariff treatment to Empire products. The Safeguarding of Industries Act 1921 provided for the imposition of duties on imports of key industry goods from foreign countries with free entry or preferential rates on similar goods from Empire countries; whilst the Dyestuff Import Regulation of the previous year allowed the unrestricted import of dyestuffs of Empire origin although imports of foreign dyestuffs were subjected to licensing restrictions. In 1925 important preferences were accorded or increased on sugar (for ten years) tobacco, dried fruit, wine and several other items. In the following three years further preferences were established under the Safeguarding of Industries Act whilst in 1927 screening quotas for British films and in 1928 further sugar concessions were introduced.

By 1931, therefore, there was considerable preferential treatment of Empire goods entering the United Kingdom, especially of such goods as sugar, dried fruits, wine, jams, and jellies of particular interest to Australia. Nevertheless these items covered only a relatively small part of the trade of the United Kingdom which still adhered in general to free trade principles.

In 1931 to counteract the flood of dumping which followed the collapse of world trade the United Kingdom introduced emergency temporary tariff legislation with a substantial preference element, and in 1932 by enacting the Import Duties Act abandoned free trade as a policy.

So far as preference is concerned, the Import Duties Act may conveniently be considered with the Ottawa Agreements which the United Kingdom made with Australia and six other Empire countries in August and incorporated in the Ottawa Agreements Act in November, 1932.

The Import Duties Act provided for the imposition of a general ad valorem duty of 10 per cent. on all imports with certain exceptions (i.e. those shown on the Free List and those already dutiable under previous legislation). Additional duties could be imposed and items on the Free List subjected to duty. In subsequent years the range of items subject to duty under this Act was greatly extended.

The freedom of Empire goods from these duties was guaranteed under the Ottawa Agreements, which also provided for the imposition of new duties on imports from foreign, but not Empire, countries of a number of products of special interest to the Empire countries concerned. Further, they provided that these duties and selected duties under the Import Duties Act would not be varied by the United Kingdom without the consent of the other party to the respective agreement.

(ii) *The Australia-United Kingdom Trade Agreement.* The preferential advantages accorded to Australia by the United Kingdom under this unit of the Ottawa Agreements may be summarized as follows:—

- (a) Continued free entry was guaranteed for three years for Australian eggs, poultry, butter, cheese and other milk products. (This freedom of entry still continues). Similar foreign goods were subjected to duty thus giving Australia a preference of 1s. to 1s. 9d. per great hundred on eggs; 10 per cent. ad val. on poultry; 15s. per cwt. on butter; 15 per cent. ad val. on cheese; 5s. per cwt. on sweetened whole condensed milk; and 6s. per cwt. on unsweetened whole condensed milk and milk powder and other unsweetened preserved milk.
- (b) Preferences were created on the following products by imposing a duty on like foreign articles whilst guaranteeing free entry to Australian produce: wheat (2s. per quarter); apples and pears (4s. 6d. per cwt.); canned apples (3s. 6d. per cwt.); other canned fruits (15 per cent. ad val.); certain dried fruits, raisins, etc. (10s. 6d. per cwt.); honey (7s. per cwt.); oranges (3s. 6d. per cwt. in season); raw grape fruit (5s. per cwt. in season); and grapes (1½d. per lb. in season).
- (c) The preferential margins on the commodities mentioned in (a) and (b) above were not to be reduced without the consent of the Australian Government and this provision also applied to the 10 per cent. preference on leather, tallow, canned meats, barley, wheat flour, macaroni, dried peas, casein, eucalyptus oil, meat extracts and essences, copra, sugar of milk, sausage casings, wattle bark, asbestos and certain dried fruits.

- (d) The Agreement also provided for a preference of 2d. per lb. on unwrought copper, but this was never implemented as Empire producers could not demonstrate their ability to continue offering their copper on first sale to the United Kingdom at prices not exceeding the world price, which was a condition of the preference. A similar condition applied to wheat, zinc and lead. In the case of zinc and lead the duty was changed from an ad valorem rate of 10 per cent. to a specific rate at an early stage in the life of the Agreement.
- (e) Australia, although not securing in the agreement with the United Kingdom a commitment on the amount and duration of the preference margin applying to a number of commodities of some importance to Australia (e.g. rice), had its interest safeguarded by the fact that such items were usually covered by the United Kingdom's agreement with another Empire country. Such benefits were generalized to Australia.
- (f) The United Kingdom agreed to regulate meat imports and stated its policy as being to give the Dominions an expanding share of United Kingdom meat imports.
- (g) Preferential tariff advantages were also obtained in the British non-self-governing colonies and protectorates.

The preferences operating before Ottawa and not increased by the Ottawa Agreement were continued. Thus the preferential margins on heavy wines, sugar, the sugar content of goods containing added sweetening matter, currants, etc., remained in effect.

(iii) *Developments since the Ottawa Agreement.* The Australia-United Kingdom Agreement operated with virtually no alteration until the beginning of 1939. Since then three major factors have been responsible for altering its terms or significance:—

- (a) *The United Kingdom-United States Trade Agreement, 1938.* This Agreement became effective from 1st January, 1939, and, to enable the United Kingdom to secure concessions from the United States of America, Australia agreed to the following reductions in the preferences which her products were enjoying in the United Kingdom:—

Wheat (preference eliminated); apples and pears (1s. 6d. per cwt. in Northern Hemisphere season); honey (2s. per cwt.); canned apples (1s. 3d. per cwt.); canned grapefruit (preference eliminated). The ad valorem duty of 15 per cent. was replaced by specific duties of 5s. 6d. per cwt. on canned fruit salad, 5s. per cwt. on canned pineapples and 4s. per cwt. on canned loganberries.

- (b) *Long-term Contracts with United Kingdom.* During and after the war Australia made contracts under which the United Kingdom became obligated to purchase the whole or a substantial part of the exportable surplus of several important Australian products normally entitled to preferential treatment. Meat, sugar, dried fruits, apples and pears, butter, cheese and eggs are notable examples. The tariff preference is not significant whilst these contracts are operative.
- (c) *The General Agreement on Tariffs and Trade.* As part of the settlement for concessions secured by Australia from other countries under this Agreement, signed at Geneva in 1947, Australia consented to the following reductions in the preference margins guaranteed to her under the Ottawa Agreement:—

Apples (margin eliminated during Northern Hemisphere season); raisins (2s. per cwt.); canned peaches, pears and apricots (3 per cent. ad val.); non-tropical canned fruit salad (margin eliminated); dried apricots (2s. 6d. per cwt.); dried prunes, apples, peaches and nectarines (margin eliminated); honey (nil to 1s. 6d. per cwt. according to value for duty.) The preference margin was also modified on a number of items in which Australia was interested but on which her consent to reduction was not required under the Ottawa Agreement. Examples are fruit pulp, pig iron, rice, hard soap, glue, gelatine and size. The preference on light wine was increased from 4s. per gallon to 10s. per gallon.

11. Tariff Board.—The Tariff Board Act 1921-1947 provides for the appointment of a Tariff Board consisting of four members, one of whom shall be an administrative officer of the Department of Trade and Customs. This member may be appointed Chairman of the Board. Members of the Board are appointed for a term of not less than one year nor more than three years, and two members may be appointed as a Committee for making special inquiries. The purpose of the Tariff Board is to assist the Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for inquiry and report include disputes arising out of the interpretation of any Customs or Excise Tariff; the necessity for new, increased or reduced duties; the necessity for granting bonuses; any proposal for the application of the British Preferential Tariff to any part of the British Dominion or any foreign country; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for inquiry and report the following matters:—the classification of goods under items of the Tariff that provide for admission under By-laws; the determination of the value of goods for duty; the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws of the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and any other matter affecting the encouragement of primary and secondary industries in relation to the Tariff.

Inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff shall be held in public, and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921-1936 shall be taken in public on oath.

The annual report of the Tariff Board for 1947-48 stated that during the year public inquiries were held on the following subjects:—

Spectacle frames and mountings, motor vehicle bodies and pressed panels, truck cabs, surgical instruments, metal-working chucks, acetylene black, hand and breast drills and carpenters' braces, moulders' chaplets and pipe nails, aviation spark plugs, axes, adzes, hatchets and sledge hammers, kit-bag frames, felt for the manufacture of tennis balls, long handled pruning shears, bicarbonate of soda, gloves, vacuum cleaners, switchgear, wire netting, tractors and plastics and materials therefor.

During the year 1947-48 twenty-four reports were furnished to the Minister for Trade and Customs. Nineteen reports were the result of public inquiry, three related to the question of the operation of deferred rates of duty and one on questions of Tariff classification.

Fifteen references from the Minister for Trade and Customs were on hand on 1st July, 1948.

12. Trade Descriptions.—The Commerce (Trade Descriptions) Act 1905 as amended by the Acts of 1926, 1930 and 1933 gives power to compel the placing of a proper description on certain prescribed goods, or on packages containing the same, being imports or exports of the Commonwealth. The goods to which a trade description must be applied are:—(a) Articles used for food or drink by man, or used in the manufacture or preparation of articles used for food or drink by man; (b) medicines or medicinal preparations for internal or external use; (c) manures; (d) apparel (including boots and shoes) and the materials from which apparel is manufactured; (e) jewellery; (f) seeds and plants; and (g) brushware.

13. Acts Passed in 1947 and 1948.—The following Commonwealth Acts relating to Australian production and trade were assented to during the years 1947 and 1948 :—

ACTS PASSED IN 1947.

- Customs Tariff Validation Act No. 7 of 1947. An Act to provide for the validation of Collections of Duties of Customs under Customs Tariff Proposals.
- Customs Tariff (Southern Rhodesian Preference) Validation Act No. 8 of 1947. An Act to provide for the Validation of Collections of Duties of Customs under Customs Tariff (Southern Rhodesian Preference) Proposals.
- Excise Tariff Validation Act No. 9 of 1947. An Act to provide for the Validation of Collections of Duties of Excise under Excise Tariff Proposals.
- Gift Duty Assessment Act No. 14 of 1947. An Act to amend the Gift Duty Assessment Act 1941-1942.
- Gift Duty Act No. 15 of 1947. An Act to amend the Gift Duty Act 1941.
- Beer Excise Act No. 20 of 1947. An Act to amend the Beer Excise Act 1901-1928.
- Wine Export Bounty Act No. 42 of 1947. An Act to provide for the payment of Bounty on the export of certain fortified wine and for other purposes.
- Apple and Pear Export Charges Act No. 45 of 1947. An Act to amend section four of the Apple and Pear Export Charges Act 1938.
- Dairy Produce Export Control Act No. 53 of 1947. An Act to amend the Dairy Produce Export Control Act 1924-1942.
- Customs Act No. 54 of 1947. An Act to amend the Customs Act 1901-1936.
- New Zealand Re-exports Act No. 55 of 1947. An Act to amend the New Zealand Re-exports Act 1924.
- Trading with the Enemy Act No. 75 of 1947. An Act to amend the Trading with the Enemy Act 1939-1940 and for other purposes.
- Egg Export Control Act No. 76 of 1947. An Act relating to the export of eggs.
- Egg Export Charges Act No. 77 of 1947. An Act to impose charges upon the export of eggs.
- Beer Excise (No. 2) Act No. 85 of 1947. An Act to amend the Beer Excise Act 1901-1928 as amended by the Beer Excise Act 1947.
- Excise Act No. 88 of 1947. An Act to amend the Excise Act 1901-1942.

ACTS PASSED IN 1948.

- Customs Tariff Act No. 1 of 1948. An Act relating to Duties of Customs.
- Customs Tariff (Southern Rhodesian Preference) Act No. 2 of 1948. An Act to amend the Customs Tariff (Southern Rhodesian Preference) 1941.
- Excise Tariff Act No. 3 of 1948. An Act relating to Duties of Excise.
- Excise Tariff (No. 2) Act No. 4 of 1948. An Act relating to Duties of Excise.
- Customs Tariff (No. 2) Act No. 5 of 1948. An Act relating to Duties of Customs.
- Customs Tariff (New Zealand Preference) Act No. 6 of 1948. An Act to amend the Customs Tariff (New Zealand Preference) 1933-1934.
- Customs Tariff (Canadian Preference) Act No. 7 of 1948. An Act to amend the Customs Tariff (Canadian Preference) 1934-1939.
- Customs Tariff (Exchange Adjustment) Act Repeal Act No. 8 of 1948. An Act to repeal certain Acts relating to Adjustments in Duties of Customs.
- Customs Tariff (No. 3) Act No. 9 of 1948. An Act relating to Duties of Customs.
- Customs Tariff (New Zealand Preference) (No. 2) Act No. 10 of 1948. An Act to amend the Customs Tariff (New Zealand Preference) 1933-1934 as amended by the Customs Tariff (New Zealand Preference) 1948.
- Customs Tariff (Canadian Preference) (No. 2) Act No. 11 of 1948. An Act to amend the Customs Tariff (Canadian Preference) 1934-1939 as amended by the Customs Tariff (Canadian Preference) 1948.
- Customs Tariff (No. 4) Act. An Act relating to Duties of Customs.
- Customs Tariff (Canadian Preference) (No. 3) Act No. 13 of 1948. An Act to amend the Customs Tariff (Canadian Preference) 1934-1939 as amended by the Customs Tariff (Canadian Preference) 1948 and by the Customs Tariff (Canadian Preference) (No. 2) 1948.

Excise Tariff (No. 3) Act (No. 14) of 1948. An Act relating to Duties of Excise. Customs Tariff Validation Act No. 24 of 1948. An Act to provide for the Validation of Collections of Duties of Customs under Customs Tariff Proposals.

Excise Tariff Validation Act No. 25 of 1948. An Act to provide for the Validation of Collections of Duties of Excise under Excise Tariff Proposals.

Primary Produce Export Charges Repeal Act No. 28 of 1948. An Act to repeal the Primary Produce Export Organization Act 1935 and the Primary Produce Export Charges Act 1935-1938 and for other purposes.

Wheat Export Charge Act No. 49 of 1948. An Act to impose a charge on wheat and wheat products exported from the Commonwealth.

Egg Export Control Act No. 63 of 1948. An Act to amend the Egg Export Control Act 1947.

Customs Tariff (No. 5) Act No. 92 of 1948. An Act relating to Duties of Customs.

Excise Tariff (No. 4) Act No. 93 of 1948. An Act relating to Duties of Excise.

§ 3. Lend-Lease and Mutual Aid between Australia and the United States.

Particulars of Lend-Lease and Mutual Aid between Australia and the United States of America are given in detail in Official Year Book, No. 36, pp. 331-6 and the Terms of Settlement are referred to in Official Year Book No. 37, pp. 393-4.

§ 4. Mutual Aid between Canada and Australia.

Particulars of the arrangements whereby assistance was given by Canada to Australia during the war years, under the terms of the Canadian Mutual Aid Act, are given in detail in Official Year Book No. 36, pp. 336-8 while the termination of Canadian Mutual Aid is dealt with in Official Year Book No. 37, pp. 394-5.

§ 5. Trade Commissioner Service.

Empire and foreign countries have deemed it necessary in their trade interests to establish generous overseas representation and have for many years maintained extensive overseas trade services.

Prior to 1920, Australian representation abroad was limited to the High Commissioner's Office, in London, with a subsidiary agent in Paris, and the Office of the Commissioner-General for Australia in New York. Apart from the facilities afforded by those offices, the only form of overseas trade representation available to Australia was that of the British Overseas Trade Service, a service whose activities are naturally more particularly devoted to the development of United Kingdom rather than Dominion trade.

The growing importance of Australia's trade with Canada led to the appointment in 1929 of an Australian Trade Commissioner in that country. The part played by that official in the subsequent negotiation of the Trade Agreement with Canada, in the cultivation of close and cordial relations with the Canadian authorities, and in general in focussing interest on Australia and Australian products, amply demonstrated the value of such appointments both to the Commonwealth Government and the Australian trading community.

The general advantages to be derived from the appointment of Trade Commissioners may be briefly stated as follows :—(a) fostering of goodwill, (b) correction and avoidance of misunderstandings, and (c) dissemination of knowledge concerning the respective countries. Particular facilities which they are able to afford to the trading community are (a) information as to present and prospective demand for goods, (b) information as to foreign and local competition, (c) advice as to best selling methods, (d) reports as to the standing of foreign buyers, (e) specification of articles in demand, (f) dealing with trade inquiries, (g) advice and assistance to commercial visitors regarding trade matters,

(h) settlement of difficulties between exporters in Australia and buyers abroad, and
 (i) furnishing of information as to foreign import requirements, customs duties, trade regulations, etc.

In addition to the foregoing particular trading functions, it is the duty of a Trade Commissioner to watch and advise the Government regarding any developments in his Territory affecting not only trade and commerce, but any other matters of concern to his home Government.

Trade Commissioners are drawn either from the commercial world or from the ranks of the Public Service as circumstances dictate. With each Trade Commissioner, however, it is customary to provide an Assistant Trade Commissioner, who is selected to undergo training in the service and qualify at a later stage for appointment as a Trade Commissioner. The staffing arrangements are in this way designed to enable the Government to avail itself of the best procurable executives of either the Public Service or the commercial world and at the same time to build up a first class personnel to carry out a vigorous policy of expansion in connexion with Australia's overseas trade.

The overseas trade representation is shown in Chapter XXVIII.—“Miscellaneous”.

§ 6. Method of Recording Imports and Exports.

1. **Value of Imports.**—The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged *ad valorem*. By Act No. 54 of 1947, which operated from 15th November, 1947, the Customs Act was amended to provide that the value for duty of goods imported into Australia should be the f.o.b. value in Australian currency instead of the British currency f.o.b. value plus 10 per cent.

Section 154 (1) of the Customs Act 1901-1947 provides that “when any duty is imposed according to value, the value for duty shall be the sum of the following:—

- (a) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or
- (ii) the current domestic value of the goods, whichever is the higher ;
- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export ;

“Current domestic value” is defined as “the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country”. All import values shown throughout this and other chapters of this issue of the Official Year Book are therefore uniform f.o.b. values in Australian currency.

2. **Value of Exports.**—Prior to 1st July, 1929 the recorded value of all goods exported was taken as representing the value in the principal markets of Australia in the ordinary commercial acceptance of the term. Owing to the inflated values arbitrarily allotted in recent years to commodities which are subject to governmental control or subsidy, some change in the practice of valuation of exports of such commodities became desirable. Accordingly a new basis was adopted, as from 1st July, 1929, for the statistical valuation of exports of sugar, butter and goods on which bounty or rebate was paid, which would show for (a) *Sugar*—the value f.o.b. at which sold to overseas buyers, or a f.o.b. value equal to the London market price if shipped on consignment ; (b) *Goods on which bounty or rebate was paid on export*—the value in the principal markets of Australia in the ordinary commercial acceptance of the term, less the value of any bounty or rebate. Until 31st March, 1934, the basis adopted for the value of exports of *butter* was the current market value, less the amount paid as export bonus. From 31st March, 1934 to 30th June, 1937, the basis was (a) sold in Australia for export—the f.o.b. equivalent of the price at which the butter was sold, and (b) shipped on consignment—the f.o.b. equivalent of the ruling price overseas.

From 1st July, 1930 to 30th June, 1937, the basis adopted for the value of *wool* exported was (a) sold in Australia for export—the actual price paid plus the cost of services incurred in placing the wool on board ship, and (b) shipped on consignment—the f.o.b. equivalent of ruling Australian prices.

From 1st July, 1932 to 30th June, 1937, the basis adopted for the value of *wheat* exported was (a) sold in Australia for export—the f.o.b. equivalent of the price at which the wheat was sold, and (b) shipped on consignment—the f.o.b. equivalent of the current selling price overseas.

From 1st July, 1934 to 30th June, 1937, the basis adopted for the value of *flour* exported was (a) sold in Australia for export—the f.o.b. equivalent of the price at which the flour was sold, and (b) shipped on consignment—the f.o.b. equivalent of ruling Australian prices.

Since 1st July, 1937, the following revised definitions of f.o.b. values have been adopted for exports generally:—

- (1) Goods sold to overseas buyers before export—the f.o.b. equivalent of the price at which the goods were sold (e.g. as regards wool, the actual price paid by the overseas buyer plus the cost of all services incurred by him in placing the wool on board ship).
- (2) Goods shipped on consignment—the Australian f.o.b. equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were despatched for sale (as regards wool, the f.o.b. equivalent of current price ruling in Australia will normally provide a sufficient approximation to the f.o.b. equivalent of the price ultimately received).

All values to be shown in terms of Australian currency, and to include cost of containers.

3. **Customs Area.**—The Customs Area, to which all overseas trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia, comprising the States of New South Wales (including Australian Capital Territory), Victoria, Queensland, South Australia, Western Australia and Tasmania, and the Northern Territory. Non-contiguous territories and mandated areas are treated as outside countries, and trade transactions between Australia and these non-contiguous territories are part of the overseas trade of Australia. Such transactions are shown separately, i.e., the trade of Australia with each particular country is separately recorded and tabulated.

4. **Statistical Classification of Imports and Exports.**—Statistics of overseas imports and exports from which the summary tables in this issue of the Official Year Book have been extracted were compiled according to a classification which came into operation on 1st July, 1945. The new classification provides for over 2,600 separate import items and 1,100 export items.

5. **The Trade Year.**—From 1st July, 1914 the statistics relating to Oversea Trade have been shown according to the financial year (July to June). Prior to that date the figures related to the calendar year. A table is included in § 18 showing the total value of imports and exports in the calendar years 1939 and 1947 to 1949 inclusive.

6. **Records of Past Years.**—In the years preceding Federation each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As the aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, it is unfortunate that past records of values and the direction of imports and exports were not on uniform lines. The figures in the following tables for years prior to Federation have been carefully compiled and may be taken as representative of the overseas trade of Australia as a whole. On the introduction of the Customs Act 1901 the methods of recording values were made uniform throughout the States. Prior to 1905 the value of ships imported or exported was not included in the returns of trade.

7. **Ships' Stores.**—Prior to 1906 goods shipped in Australian ports on board overseas vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and omitted from the return of exports. A table showing the value of these stores shipped each year since 1938-39 is included in § 12, page 502.

§ 7. Oversea Trade.

1. Total Oversea Trade.—(i) *Including Gold.* The following table shows the total trade (including gold) of Australia with overseas countries from the earliest date for which records are available. To save space, the period 1826 to 1940-41 has been divided into five-yearly periods, and the figures shown represent the annual averages for the periods specified. Figures for individual years were published in earlier issues of the Official Year Book but it should be borne in mind, however, that the figures therein for imports are in British currency. (*See note to following table.*)

In this chapter the values in all tables of Imports and Exports are shown in Australian currency f.o.b.

TOTAL OVERSEA TRADE : AUSTRALIA.
(INCLUDING GOLD.)

Period.(a)	Value (£'000).			Value per Head of Population (£ s. d.).			Percentage of Exports on Imports.
	Imports.	Exports.	Total.	Imports.	Exports.	Total.	
1826 to 30	580	153	733	9 13 1	2 11 0	12 4 1	%
1831 " 35	1,040	613	1,653	10 18 1	6 8 6	17 6 7	26.4
1836 " 40	2,075	1,112	3,187	13 8 10	7 4 1	20 12 11	58.9
1841 " 45	1,733	1,378	3,111	6 18 0	5 9 8	12 7 8	53.6
1846 " 50	2,163	2,264	4,427	6 6 3	6 12 2	12 18 5	79.5
1851 " 55	10,846	11,414	22,260	17 16 8	18 15 5	36 12 1	104.7
1856 " 60	17,105	16,019	33,124	16 12 9	15 11 7	32 4 4	105.2
1861 " 65	18,302	18,099	37,001	14 8 5	14 14 8	29 3 1	93.7
1866 " 70	16,992	19,417	36,409	11 0 6	12 11 11	23 12 5	102.2
1871 " 75	19,084	24,247	44,231	11 2 5	13 9 10	24 12 3	114.3
1876 " 80	22,384	23,772	46,156	10 13 8	11 6 11	22 0 7	121.3
1881 " 85	31,723	28,055	59,778	12 13 9	11 4 5	23 18 2	106.2
1886 " 90	31,523	26,579	58,102	10 12 1	8 18 10	19 10 11	88.4
1891 " 95	24,850	33,083	58,533	7 7 8	10 0 2	17 7 10	84.3
1896 " 1900	30,694	41,094	71,788	8 7 6	11 4 3	19 11 9	135.5
1901 " 05	35,689	51,237	86,926	9 1 11	13 1 1	22 3 0	133.9
1906 " 10	46,825	(b) 69,336	116,161	11 0 6	16 6 6	27 7 0	143.6
1911 " 15-16	66,737	74,504	141,241	13 15 5	15 7 6	29 2 11	148.1
1916-17 to 1920-21	91,577	115,066	206,643	17 8 4	21 17 9	39 6 1	111.6
1921-22 to 1925-26	124,404	134,545	258,949	21 3 1	22 17 7	44 0 8	125.6
1926-27 to 1930-31	119,337	131,382	250,719	18 11 10	20 9 4	39 1 2	108.2
1931-32 to 1935-36	73,798	120,958	194,756	11 1 0	18 2 2	29 3 2	110.1
1936-37 to 1940-41	123,553	157,610	281,163	17 16 2	22 14 3	40 10 5	163.9
1941-42 ..	173,593	168,977	342,570	24 6 0	23 13 0	47 19 0	127.6
1942-43 ..	245,762	125,557	371,319	34 2 3	17 8 7	51 16 10	97.3
1943-44 ..	244,350	146,682	391,032	33 12 1	20 3 5	53 15 6	51.1
1944-45 ..	215,008	155,271	370,279	29 5 1	21 2 7	50 7 8	60.0
1945-46 ..	178,857	223,288	402,145	24 1 6	30 1 0	54 2 6	72.2
1946-47 ..	209,485	309,029	518,514	27 17 2	41 1 10	68 19 0	124.8
1947-48 ..	339,746	409,954	749,700	44 9 4	53 13 1	98 2 5	147.5
1948-49 ..	415,194	546,330	961,524	53 4 9	70 1 1	123 5 10	120.7
							131.6

(a) The figures shown for the years 1826 to 1940-41 represent the annual averages for the periods covered. The trade of the individual years will be found in Official Year Book No. 35 and earlier issues but it should be noted that imports are shown in British currency. From 1914-15 onwards the particulars relate to financial years. (b) Prior to 1906, ships' stores were included in the general exports. For value of such goods shipped on overseas vessels each year since 1938-39 see later table, § 12.

In issues of the Official Year Book prior to No. 23 fluctuations in the value of the overseas trade of Australia for earlier years have been treated in some detail. The enhanced prices ruling for commodities and the peculiar conditions affecting Australian trade were responsible for the high value of imports in the years following the 1914-18 War and these factors should be taken into consideration in making comparisons with earlier years.

In 1924-25 the total value of oversea trade exceeded £300 million for the first time. Of the total value of trade, amounting to £318,454,000, imports represented £157,143,000 and exports £161,311,000. Imports in 1924-25, however, included an exceptionally large quantity of bullion and specie valued at £10,543,000. In the three years ended 1928-29 imports fell but exports were well maintained, but in 1929-30 both imports and exports declined substantially. The full effects of the economic depression are reflected in the greatly diminished trade figures for 1930-31 and some years thereafter. The lowest level was recorded in 1931-32 when the total trade amounted to £137,538,000. Following a gradual improvement in 1933-34 and 1934-35, recovery was more rapid in the three years ended 1937-38, owing generally to higher prices for exports of primary products and the rising flow of imports. In 1937-38, however, export prices fell sharply and declined still further in 1938-39. In 1939-40 the value of trade rose substantially as a result of increases in the value of both imports and exports, but declined again in 1940-41, mainly due to import restrictions and scarcity of shipping.

The outbreak of war in the Pacific in 1941 resulted in an enormous increase in the value of imports during the years 1941-42 to 1945-46. Fluctuating yearly increases in the value of exports were recorded during the same period. During 1946-47 the value of total trade reached the total of £518,514,000, due largely to substantial increases in import and export prices.

Import and export values continued to soar during the following two years. The total value of trade in 1947-48 amounted to £749,700,000 (imports, £339,746,000 and exports, £409,954,000) and in 1948-49 the record total of £961,524,000 was reached, when imports and exports attained the record totals of £415,194,000 and £546,330,000 respectively.

(ii) *Excluding Gold.* The fluctuations in merchandise trade (including silver as merchandise) are shown more clearly in the following table, from which *all* gold movements have been excluded :—

OVERSEA TRADE : AUSTRALIA.
(EXCLUDING GOLD BULLION AND SPECIE.)

Year.	Imports excluding Gold.	Exports excluding Gold.	Total Trade excluding Gold.	Value per Head of Population.			Percentage of Exports on Imports.
				Imports.	Exports.	Total Trade.	
	£'000.	£'000.	£'000.	£ s. d.	£ s. d.	£ s. d.	%
1938-39	113,298	122,513	235,841	16 6 10	17 13 5	34 0 3	108.2
1944-45	213,580	155,271	368,851	29 1 3	21 2 7	50 3 10	72.7
1945-46	177,681	190,876	374,557	23 18 3	26 10 0	50 8 3	110.8
1946-47	208,362	309,027	517,389	27 14 2	41 1 10	68 16 0	148.3
1947-48	338,103	406,123	744,226	44 5 3	53 3 2	97 8 5	120.1
1948-49	414,086	546,326	960,412	53 1 9	70 1 0	123 2 9	131.9

2. *Balance of Trade.*—The table on page 479 shows the percentage of exports on imports (including gold) for five-yearly periods from 1826 to 1940-41 and for each year from 1941-42 to 1948-49, while the table above shows the percentage of exports on imports (excluding gold) for each year 1944-45 to 1948-49 compared with 1938-39. Reference to the first-mentioned table shows that subsequent to the five-yearly period 1886-90 the balance of trade, for all periods to 1936-37 to 1940-41, had been on the side

of exports. The position was reversed, however, during the war years 1941-42 to 1944-45 when each year recorded a substantial excess of imports. The post-war years to 1948-49 have again shown record balances in favour of exports.

In the following table the balance of commodity trade, including the value of gold currently produced in Australia, has been separated from the monetary movement of gold :—

COMMODITY BALANCE OF TRADE AND MONETARY MOVEMENT OF GOLD.
(£'000,000.)

Year.	A.	B.	C.	D.	E.	F.	G.
	Total Imports other than Gold (Specie, Bullion and in Matte.)	Total Exports, other than Gold (Specie, Bullion and in Matte.)	Gold produced in Australia.	Total of Merchandise Exports and Gold Production. B+C	Commodity Balance of Trade. D-A	Net Exports of Gold (Specie, Bullion and in Matte) in excess of Production. F	Total Balance E+F
1910 ..	53.7	69.8	11.6	81.4	27.7	- 7.9	19.8
1911 ..	59.4	67.5	10.5	78.0	18.6	- 0.1	18.5
1912 ..	69.8	66.8	9.9	76.7	6.9	1.1	8.0
1913 ..	73.1	75.1	9.4	84.5	11.4	- 7.3	4.1
1914 (a) ..	35.5	36.5	4.4	40.9	5.4	- 3.7	1.7
1914-15 ..	58.2	58.0	8.5	66.5	8.3	- 6.3	2.0
1915-16 ..	70.2	64.2	7.7	71.9	1.7	2.3	4.0
1916-17 ..	69.1	86.3	6.6	92.9	23.8	4.8	28.6
1917-18 ..	35.3	75.0	5.8	80.8	25.5	- 0.9	24.6
1918-19 ..	86.7	106.8	5.4	112.2	25.5	- 5.6	19.9
1919-20 ..	89.9	144.3	5.4	149.7	59.8	0.1	59.9
1920-21 ..	148.9	126.8	4.7	131.5	-17.4	0.6	-16.8
1921-22 ..	93.7	124.3	3.8	128.1	34.4	- 0.3	34.1
1922-23 ..	119.8	115.6	3.3	118.9	- 0.9	- 1.1	- 2.0
1923-24 ..	127.8	116.7	3.2	119.9	- 7.9	- 0.4	- 8.3
1924-25 ..	133.3	160.4	2.8	163.2	29.9	-12.3	17.6
1925-26 ..	137.9	141.9	2.3	144.2	6.3	1.7	8.0
1926-27 ..	149.8	132.7	2.2	134.9	-14.9	8.6	- 6.3
1927-28 ..	133.6	138.4	2.1	140.5	6.9	- 0.3	6.6
1928-29 ..	130.3	138.6	1.9	140.5	10.2	0.8	11.0
1929-30 ..	118.9	98.1	1.9	100.0	-18.9	24.7	5.8
1930-31 ..	62.2	90.6	2.5	93.1	30.9	11.5	42.4
1931-32 ..	51.0	97.1	4.5	101.6	50.6	6.6	57.2
1932-33 ..	64.9	98.7	5.8	104.5	39.6	15.3	54.9
1933-34 ..	67.8	114.2	7.1	121.3	53.5	1.2	54.7
1934-35 ..	82.7	103.4	7.4	110.8	28.1	0.6	28.7
1935-36 ..	95.3	124.1	9.2	133.3	38.0	1.6	39.6
1936-37 ..	103.3	148.2	11.3	159.5	56.2	0.4	56.6
1937-38 ..	127.5	141.3	12.8	154.1	26.6	0.8	27.4
1938-39 ..	113.3	122.5	14.6	137.1	23.8	0.2	24.0
1939-40 ..	131.9	149.4	17.6	167.0	35.1	- 1.7	33.4
1940-41 ..	123.9	134.9	16.4	151.3	27.4	1.8	29.2
1941-42 ..	170.3	158.9	14.7	173.6	3.3	- 7.9	- 4.6
1942-43 ..	244.2	125.5	9.7	135.2	-109.0	-11.2	-120.2
1943-44 ..	242.8	146.6	7.1	153.7	-89.1	- 8.6	-97.7
1944-45 ..	213.6	155.3	6.9	162.2	-51.4	- 8.2	-59.6
1945-46 ..	177.7	196.9	7.4	204.3	26.6	17.8	44.4
1946-47 ..	208.4	309.0	9.8	318.8	110.4	-10.9	99.5
1947-48 ..	338.1	406.1	9.7	415.8	77.7	- 7.4	70.3
1948-49 ..	414.1	546.3	10.1	556.4	142.3	-11.2	131.1

(a) First six months only.

NOTE.—From 1939-40 onward, under contracts with the British Government, Australia received payment for some exportable commodities (e.g., wool, etc.) irrespective of when the goods were shipped. Payments for exportable goods were somewhat larger than the recorded value of exports, and payments relating to the balance of trade were more favorable than is indicated by the figures above which relate only to goods actually shipped.

3. Balance of Payments.—The balance of visible trade, including the net movement of precious metals, does not present a complete picture of Australia's international transactions during each year. Allowance must also be made for unrecorded imports

and exports, for services rendered and received, and for international capital and interest transactions. The values of some of these items are known, and some of those remaining can be estimated with a sufficient measure of accuracy, but for many items it is difficult to make even a rough guess. A continuous investigation is being made into the values of these "invisible" items in the balance of payments.

§ 8. Direction of Oversea Trade.

1. Imports according to Country of Origin.—The following table shows the value of the imports into Australia, during the years 1944-45 to 1948-49 compared with the year 1938-39, of commodities stated to be the produce or manufacture of the undermentioned countries.

AUSTRALIAN IMPORTS: COUNTRIES OF ORIGIN. (EXCLUDING GOLD BULLION, SPECIE AND IN MATTE.) (£'000.)

Country of Origin.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
British Countries—						
United Kingdom	46,079	70,329	67,063	74,573	132,238	209,313
Australian Territories—						
Nauru	741	..	..	236	359	1,033
New Guinea	189	683	206	267	885	1,384
Papua	237	437	265	189	174	228
Canada	8,806	10,239	7,914	16,067	15,341	11,952
Ceylon	957	4,499	5,764	6,570	8,133	7,512
India	3,272	18,406	11,442	17,444	26,698	25,862
Malaya (British)	1,029	1	7	3,140	3,863	4,028
New Zealand	1,618	1,451	2,057	2,875	3,436	3,649
Union of South Africa ..	278	652	868	1,386	3,232	2,714
Other British Countries ..	1,984	3,979	4,739	6,642	11,766	18,605
Total, British Countries	65,190	110,676	100,325	129,989	206,125	286,280
Foreign Countries—						
Belgium	1,120	..	63	1,596	5,220	3,557
China	526	4	96	1,148	1,667	2,542
France	1,172	2	25	1,674	3,118	3,998
Germany	4,710	3	12	143	639	1,840
Italy	781	..	4	2,777	2,710	3,797
Japan	4,666	..	3	697	1,433	1,711
Netherlands	799	..	14	476	2,595	3,874
Netherlands Dependencies,						
Indonesia	8,117	25	71	213	4,419	11,097
Norway	432	..	83	711	3,174	4,367
Philippines Republic ..	138	..	1	4	48	14
Sweden	1,079	4	512	1,534	4,905	9,225
Switzerland	1,072	247	848	1,083	1,951	2,418
United States of America ..	16,696	83,079	47,703	39,791	66,826	41,527
Other Foreign Countries ..	4,166	16,440	18,193	18,608	25,673	28,630
Total, Foreign Countries	45,474	99,804	67,628	70,455	124,378	118,606
Origin not Disclosed .. ..	..	..	6,868	3,740	1,000	1,175
Outside Packages	2,634	3,100	2,860	4,178	6,600	8,025
Total	113,298	213,580	177,681	208,362	338,103	414,086

2. **Percentage of Imports from Various Countries.**—In view of the fluctuations in the total values of imports, it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the import trade of Australia. A better idea of the proportions of imports supplied by the various countries may be obtained from the following table of percentages.

AUSTRALIAN IMPORTS : PERCENTAGES FROM COUNTRIES OF ORIGIN.

(EXCLUDING GOLD BULLION, SPECIE AND IN MATTE.)

(Per Cent.)

Country of Origin.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
British Countries—						
United Kingdom	40.67	32.92	37.74	35.79	39.11	50.55
Australian Territories—						
Nauru	0.65	..	..	0.11	0.11	0.25
New Guinea	0.17	0.32	0.12	0.13	0.26	0.33
Papua	0.21	0.21	0.15	0.09	0.05	0.06
Canada	7.77	4.79	4.45	7.97	4.54	2.89
Ceylon	0.84	2.11	3.24	3.15	2.40	1.81
India	2.89	8.62	6.44	8.37	7.90	6.25
Malaya (British)	0.91	..	..	1.51	1.14	0.97
New Zealand	1.43	0.68	1.16	1.38	1.02	0.88
Union of South Africa	0.25	0.31	0.49	0.67	0.96	0.66
Other British Possessions..	1.75	1.86	2.67	3.22	3.48	4.49
Total, British Countries	57.54	51.82	56.46	62.39	60.97	69.14
Foreign Countries—						
Belgium	0.99	..	0.03	0.77	1.54	0.86
China	0.46	..	0.05	0.55	0.49	0.61
France	1.03	..	0.01	0.80	0.92	0.97
Germany	4.16	..	..	0.07	0.19	0.45
Italy	0.69	..	0.01	1.33	0.80	0.92
Japan	4.12	..	..	0.33	0.42	0.41
Netherlands	0.71	..	0.01	0.23	0.77	0.94
Netherlands Dependencies,						
Indonesia	7.16	0.01	0.04	0.10	1.31	2.68
Norway	0.38	..	0.05	0.34	0.94	1.05
Philippines Republic	0.12	..	..	..	0.02	..
Sweden	0.95	..	0.29	0.74	1.45	2.23
Switzerland	0.95	0.12	0.48	0.52	0.58	0.58
United States of America..	14.74	38.90	26.85	19.10	19.77	10.03
Other Foreign Countries..	3.68	7.70	10.24	8.93	7.59	6.91
Total, Foreign Countries	40.14	46.73	38.06	33.81	36.79	28.64
Origin not Disclosed .. ..	..	..	3.87	1.79	0.29	0.28
Outside Packages	2.32	1.45	1.61	2.01	1.95	1.94
Total	100	100	100	100	100	100

Imports from the United Kingdom during the past five years progressed steadily to 50.55 per cent. of the total of imports during 1948-49 compared with 40.67 per cent. during 1938-39. Imports from the United States of America, on the other hand, diminished during the same period to 10.03 per cent. compared with 14.74 per cent. during the year 1938-39.

3. **Direction of Exports.**—The following table shows the value of commodity exports to the principal countries during the years 1938-39 and 1944-45 to 1948-49.

EXPORTS FROM AUSTRALIA TO VARIOUS COUNTRIES.

(EXCLUDING GOLD BULLION, SPECIE AND IN MATTE.)

(£'000.)

Country of Destination.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
British Countries—						
United Kingdom ..	66,725	52,119	53,734	89,633	152,104	231,600
Canada ..	1,994	3,797	3,772	5,251	5,009	8,647
Ceylon ..	1,327	6,840	6,950	7,116	10,213	9,341
Fiji ..	623	1,127	1,325	1,573	2,060	2,202
Hong Kong ..	475	..	3,337	6,022	6,365	3,918
India ..	1,965	15,798	18,045	13,029	26,689	25,985
Malaya (British) ..	1,911	..	6,514	18,353	7,785	6,299
Mauritius ..	109	673	532	1,886	2,234	1,169
New Zealand ..	6,682	7,086	8,033	12,023	15,258	17,343
Papua ..	299	299	524	1,236	1,619	1,962
Union of South Africa ..	813	1,327	1,806	3,913	2,772	5,103
Other British Possessions..	2,255	22,418	20,219	8,568	26,882	25,745
Total, British Countries	85,178	111,484	124,791	170,103	258,990	339,314
Foreign Countries—						
Belgium ..	5,547	..	7,461	19,084	19,261	19,935
Chile and Peru ..	3	955	2	18	6	81
China ..	3,023	..	885	6,067	2,757	1,439
Egypt ..	601	3,156	3,008	4,495	5,852	10,308
France..	9,379	358	10,391	20,694	36,483	46,608
Germany ..	2,652	..	..	1,395	4,021	4,141
Italy ..	1,211	2,083	901	13,218	11,860	29,054
Japan ..	4,866	..	1,778	5,594	2,506	7,389
Netherlands ..	1,039	..	671	2,353	3,373	4,532
Netherlands Dependencies,						
Indonesia ..	1,373	67	1,808	486	132	1,285
Norway ..	25	..	113	517	1,024	328
Philippines Republic ..	499	2	116	454	256	514
Sweden ..	637	..	891	3,224	3,037	4,545
United States of America..	3,614	30,766	37,340	47,599	35,074	32,289
U.S.S.R. (Russia) ..	278	42	541	626	2,858	12,360
Other Foreign Countries ..	2,618	4,358	6,179	13,100	18,633	32,204
Total, Foreign Countries	37,365	41,787	72,085	138,924	147,133	207,012
Unrecorded exports (estimated) ..	..	2,000	..	..	..	..
Total ..	122,543	155,271	196,876	309,027	406,123	546,326

4. **Percentage of Exports to Various Countries.**—The relative importance of various countries as markets for Australian produce is shown by the following table of percentages. Exports to the United Kingdom totalled 42.39 per cent. of the total in 1948-49 and all British countries 62.11 per cent., compared with 54.45 per cent. and 69.51 per cent. respectively during 1938-39.

Foreign countries absorbed 37.89 per cent. of the total exports during 1948-49 compared with 30.49 per cent. during the year 1938-39.

EXPORTS FROM AUSTRALIA : PERCENTAGES TO VARIOUS COUNTRIES.

(EXCLUDING GOLD BULLION, SPECIE AND IN MATTE.)

(Per Cent.)

Country of Destination.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
British Countries—						
United Kingdom ..	54.45	33.57	27.29	29.01	37.45	42.39
Canada	1.63	2.45	1.92	1.70	1.23	1.58
Ceylon	1.08	4.41	3.53	2.30	2.51	1.71
Fiji	0.51	0.73	0.67	0.51	0.51	0.40
Hong Kong ..	0.39	..	1.69	2.14	1.57	0.72
India	1.60	10.18	9.16	4.22	6.57	4.76
Malaya (British) ..	1.56	..	3.31	5.94	1.92	1.15
Mauritius	0.09	0.43	0.27	0.61	0.55	0.21
New Zealand ..	5.45	4.56	4.08	4.18	3.76	3.18
Papua	0.25	0.19	0.27	0.40	0.40	0.36
Union of South Africa ..	0.66	0.85	0.92	1.27	0.68	0.94
Other British Possessions ..	1.84	14.43	10.28	2.76	6.62	4.71
Total, British Countries	69.51	71.80	63.39	55.04	63.77	62.11
Foreign Countries—						
Belgium	4.53	..	3.79	6.18	4.74	3.65
Chile and Peru ..	..	0.62	..	..	..	0.01
China	2.46	..	0.45	1.96	0.68	0.26
Egypt	0.49	2.03	1.53	1.46	1.44	1.89
France	7.65	0.23	5.28	6.70	8.99	8.53
Germany	2.17	..	..	0.45	0.99	0.76
Italy	0.99	1.34	0.46	4.28	2.92	5.32
Japan	3.97	..	0.90	1.81	0.62	1.35
Netherlands ..	0.85	..	0.34	0.76	0.83	0.83
Netherlands Dependencies,						
Indonesia	1.12	0.04	0.92	0.16	0.03	0.24
Norway	0.02	..	0.06	0.17	0.25	0.06
Philippines Republic ..	0.41	..	0.06	0.15	0.06	0.09
Sweden	0.52	..	0.45	1.04	0.75	0.83
United States of America ..	2.95	19.82	18.97	15.40	8.64	5.91
U.S.S.R. (Russia) ..	0.23	0.03	0.27	0.20	0.70	2.26
Other Foreign Countries ..	2.13	2.80	3.13	4.24	4.59	5.90
Total, Foreign Countries	30.49	26.91	36.61	44.96	36.23	37.89
Unrecorded exports ..	..	1.29	..	..	..	..
Total	100	100	100	100	100	100

5. Balance of Trade with Principal Countries.—In the following table a comparison is made of the total Australian trade in merchandise (excluding bullion and specie) with principal countries during the years 1938-39 and 1948-49.

BALANCE OF AUSTRALIAN TRADE WITH PRINCIPAL COUNTRIES.

(EXCLUDING BULLION AND SPECIE.)

*(£'000.)

Country.	Imports from— (a)		Exports to—		Excess of Exports.	
	1938-39.	1948-49.	1938-39.	1948-49.	1938-39.	1948-49.
United Kingdom ..	46,079	209,313	66,725	231,600	20,646	22,287
Canada	8,806	11,952	1,994	8,647	— 6,812	— 3,305
India	3,272	25,862	1,965	25,985	— 1,307	123
New Zealand ..	1,618	3,649	6,682	17,343	5,064	13,694
Other British Countries ..	5,415	35,504	7,812	55,739	2,397	20,235
Total, British Countries	65,190	286,280	85,178	339,314	19,988	53,034
Belgium	1,120	3,557	5,547	19,935	4,427	16,378
China	526	2,542	3,023	1,439	2,497	— 1,103
France	1,172	3,998	9,379	46,608	8,207	42,610
Germany	4,710	1,849	2,652	4,141	— 2,058	2,292
Italy	781	3,797	1,211	29,054	430	25,257
Japan	4,666	1,711	4,866	7,389	200	5,678
Netherlands Dependencies, Indonesia	8,117	11,097	1,373	1,285	— 6,744	— 9,812
United States of America ..	16,696	41,527	3,614	32,289	— 13,682	— 9,238
Other Foreign Countries ..	7,686	48,528	5,700	64,872	— 1,986	16,344
Total, Foreign Countries	45,474	118,606	37,365	207,012	— 8,109	88,406

(a) Excludes outside packages.

NOTE.—Minus sign (—) indicates excess of imports.

The balance of trade with single countries is of little significance, since in the first place there is still a fair proportion of Australian produce distributed through the United Kingdom either immediately, by transshipment or re-sale, or ultimately, by incorporation in manufactures. Further, in very many cases international balances are equated directly by services or indirectly by exchange of goods between several countries.

§ 9. Classified Summary of Australian Oversea Trade with the United Kingdom.

1. Imports.—The following table shows, according to statistical classes, the value of imports into Australia of United Kingdom origin during the years 1944-45 to 1948-49 compared with the year 1938-39.

IMPORTS INTO AUSTRALIA OF UNITED KINGDOM ORIGIN : CLASSES.

(£.)

Class.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
I. Animal foodstuffs, etc. ..	342,323	2,086	191,852	384,544	698,009	762,307
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	214,262	6,884	169,482	101,574	760,200	1,130,000
III. Alcoholic liquors, etc. ..	699,816	385,938	328,101	330,444	573,252	677,266
IV. Tobacco, etc. ..	21,923	9,663	17,093	337,773	1,907,213	3,808,135
V. Live animals ..	54,622	24,245	111,076	170,505	172,990	311,498
VI. Animal substances, etc. ..	41,343	12,137	38,187	163,959	169,978	90,634
VII. Vegetable substances, etc. ..	240,738	228,902	466,353	637,911	892,484	1,411,371
VIII. Apparel, textiles, etc. ..	11,438,102	21,043,408	21,299,046	24,717,489	44,122,544	70,778,109
IX. Oils, fats and waxes ..	153,714	23,317	80,876	171,611	202,686	365,696
X. Paints and varnishes ..	436,660	373,670	579,317	564,664	894,846	944,299
XI. Stones and minerals, etc. ..	317,568	171,256	70,243	85,468	139,749	692,550
XII. Metals, metal manufactures, and machinery ..	20,801,191	24,964,502	22,256,869	28,414,130	52,680,953	92,402,903
XIII. Rubber and leather, etc. ..	282,345	132,755	431,962	925,484	1,634,747	3,008,682
XIV. Wood and wicker, etc. ..	97,047	27,857	57,915	172,998	239,728	353,986
XV. Earthenware, etc. ..	1,078,691	1,128,415	1,813,995	2,796,541	4,938,886	5,992,800
XVI. Paper and stationery ..	3,358,030	2,442,093	2,716,989	4,516,856	8,087,860	8,185,359
XVII. Jewellery, etc. ..	313,843	137,227	435,194	1,827,176	2,478,602	2,836,687
XVIII. Optical, surgical, and scientific instruments ..	596,654	703,230	916,000	1,453,695	2,871,806	4,395,674
XIX. Drugs, chemicals, etc. ..	2,608,761	2,863,052	3,199,677	4,380,792	5,086,256	5,884,841
XX. Miscellaneous (a) ..	2,980,312	15,648,106	11,882,814	2,417,822	3,683,968	5,278,977
XXI. Gold and silver; and bronze specie ..	16,310	..	246	1,753	1,678	1,080
Total	46,094,294	70,328,743	67,063,287	74,573,189	132,238,435	209,312,854

(a) Includes Arms, Ammunition and Explosives.

2. Exports.—In the following table the exports from Australia to the United Kingdom are shown in classes according to the same classification as for imports.

EXPORTS FROM AUSTRALIA TO THE UNITED KINGDOM : CLASSES.

(£.)

Class.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
I. Animal foodstuffs, etc. ..	24,483,853	14,393,544	20,947,840	33,372,177	43,679,309	51,897,522
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	14,369,098	2,836,785	2,214,890	9,701,218	33,948,477	66,574,539
III. Alcoholic liquors, etc. ..	906,358	283,641	418,604	865,552	1,312,703	840,101
IV. Tobacco, etc. ..	1,196	..	..	256	738	2,551
V. Live animals ..	1,754	10	63	135	1,640	3,290
VI. Animal substances, etc. ..	19,475,233	23,673,527	22,620,378	28,415,652	54,053,984	83,348,459
VII. Vegetable substances, etc. ..	100,770	686,356	554,309	488,173	268,596	115,347
VIII. Apparel, textiles, etc. ..	40,909	145,101	916,932	1,264,248	662,906	311,015
IX. Oils, fats and waxes ..	179,408	316,619	163,117	121,961	365,185	1,071,908
X. Paints and varnishes ..	3,412	476	319	15,040	26,149	886
XI. Stones and minerals, etc. ..	846,994	918,090	1,032,461	993,044	1,506,326	2,008,316
XII. Metals, metal manufactures, and machinery ..	5,201,304	5,361,348	3,653,297	11,431,204	13,058,551	21,382,996
XIII. Rubber and leather, etc. ..	422,548	452,004	442,877	692,353	793,708	600,299
XIV. Wood and wicker, etc. ..	206,537	114,112	198,009	271,541	424,367	444,381
XV. Earthenware, etc. ..	3,679	407	2,016	3,328	9,354	17,592
XVI. Paper and stationery ..	324,604	7,843	23,119	94,917	66,263	81,819
XVII. Jewellery, etc. ..	31,626	19,169	28,306	11,785	14,465	21,864
XVIII. Optical, surgical, and scientific instruments ..	16,096	4,070	63,028	31,874	54,275	99,754
XIX. Drugs, chemicals, etc. ..	108,562	72,042	123,780	319,806	292,044	216,291
XX. Miscellaneous ..	166,862	2,832,515	329,138	1,487,982	480,105	1,275,315
XXI. Gold and silver; and bronze specie ..	3,018,368	..	26,412,457	51,166	4,914,233	1,287,178
Total	68,716,031	52,118,859	80,144,940	89,633,412	155,933,458	231,601,423

3. Imports of Principal Articles.—The following table shows the value of the principal articles imported into Australia from the United Kingdom during the years 1944-45 to 1948-49 compared with the year 1938-39. The articles are shown in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES IMPORTED OF UNITED KINGDOM ORIGIN :
AUSTRALIA.
(£.)

Article.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Whisky	629,873	385,583	325,833	313,074	494,814	423,389
Fibres	43,909	84,555	88,378	33,832	143,536	27,006
Hides and skins	24,183	1,160	4,057	63,828	62,271	33,593
Seeds	26,162	1,821	5,250	11,029	10,234	12,503
Socks and stockings	39,586	1,167	34	17,856	688,563	2,638,097
Gloves	48,508	8,284	111,135	260,243	670,933	513,322
Hats and caps	84,425	1,143	10,164	89,953	222,376	293,890
Trimmings and ornaments	115,902	288,057	298,826	496,725	756,222	1,862,428
Other apparel and attire	508,906	147,164	668,476	1,712,901	2,991,956	3,870,741
Carpets and carpeting	1,065,247	30,036	307,662	1,203,843	3,641,212	5,363,276
Floorcloths and linoleums	538,807	472	203,313	542,798	1,837,124	2,780,859
Piece Goods—						
Canvas and duck	476,961	952,786	835,798	565,261	604,443	724,308
Cotton and linen	417,301	0,504,145	0,674,061	573,049	7,604,495	18,286,182
Silk and rayon	968,216	7,191,088	6,673,664	7,059,620	11,592,229	12,857,514
Woolen or containing wool	251,830	273,024	334,021	53,500	1,236,441	4,000,412
All other piece goods	908,123	1,383,801	744,002	1,300,771	2,790,000	3,811,857
Sewing-machines, cottons, etc	535,204	878,051	609,118	079,541	945,566	1,073,250
Bags and sacks	5,986	11,306	4,135	10,414	11,220	59,920
Yarns—						
Cotton	417,322	1,213,506	1,027,762	1,141,992	2,119,234	3,222,868
Rayon	231,805	1,442,499	1,628,514	1,379,998	2,118,608	2,919,870
Woolen	53,631	25,273	48	6,327	77,894	625,828
Other	48,596	33,169	61,045	57,437	71,472	30,512
Electrical machinery and appliances	2,099,300	2,753,910	3,142,111	3,258,055	6,000,155	17,044,488
Electric cables and wire, covered	1,700,800	504,000	033,301	505,218	1,076,088	3,000,520
Agricultural machinery	15,511	13,702	704,831	140,070	659,881	607,326
Metal-working machinery	800,589	244,143	444,438	1,373,544	2,147,304	2,275,296
Motive-power machinery	1,024,957	2,024,184	3,039,438	3,056,861	3,993,627	8,660,345
Iron and Steel—						
Pipes and tubes	473,498	110,825	120,708	90,438	213,957	302,369
Plate and sheet	2,444,981	289,201	628,004	1,911,100	2,749,150	5,093,542
Cutlery and platedware	519,054	407,044	690,296	1,446,413	2,069,117	1,491,100
Tools of trade	445,357	524,596	784,131	881,044	1,675,147	1,857,461
Motor cars, chassis, bodies, and parts	3,886,076	218,083	1,308,036	473,608	11,005,831	27,000,309
Rubber and rubber manufactures	200,300	102,800	371,240	809,037	1,280,532	2,649,910
Crockery	459,431	643,959	973,663	1,401,453	2,493,755	2,931,935
Glass and glassware	331,354	419,703	561,123	960,544	1,491,598	1,602,518
Paper, printing	939,577	66,030	116,985	320,974	863,010	1,464,917
Stationery and paper manufactures	1,611,107	1,730,820	1,860,899	2,918,793	4,684,388	4,381,156
Cinematograph films	64,011	78,556	39,337	62,065	113,270	221,706
Drugs, chemicals, and fertilizers	2,607,701	2,863,081	3,100,777	4,380,712	5,080,250	5,885,841
Arms and explosives	1,080,882	11,711,705	10,000,000	874,117	874,117	1,440,985
Musical instruments, pianos, etc	93,205	5,473	24,949	85,791	220,399	378,666
All other articles	14,279,702	21,542,045	17,185,066	22,501,124	41,345,943	59,590,030
Total Imports	46,094,294	70,328,743	67,063,187	74,573,189	132,238,435	209,312,854

4. Exports of Principal Articles of Australian Produce.—(i) *Quantities.* The following table shows the quantities of the principal articles of Australian produce exported to the United Kingdom during the years 1944-45 to 1948-49 compared with the year 1938-39. The articles are shown in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES EXPORTED TO THE UNITED KINGDOM : QUANTITIES. AUSTRALIA.

Article.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Butter centl.	2,170,515	825,048	1,232,784	1,166,400	1,703,262	1,622,522
Cheese " doz.	347,991	63,210	206,629	410,437	301,723	484,503
Eggs in shell centl.	10,069,570	..	6,631,477	16,385,676	13,354,405	18,112,045
Beef " doz.	2,477,128	120,116	407,271	1,524,622	2,120,260	1,514,838
Lamb " doz.	1,557,485	1,040,786	369,090	1,110,651	1,006,368	803,294
Mutton " doz.	253,074	170,156	70,687	453,870	138,245	232,358
Pork " doz.	301,204	370,045	280,501	158,624	21,721	168,488
Meats, preserved in tins " doz.	116,553	148,973	531,002	692,083	605,432	853,144
Milk and cream " doz.	28,806	23,956	23,024	105,070	65,820	78,966
Fruits, dried " doz.	1,173,664	1,019,637	432,558	555,055	729,356	523,401
" fresh " doz.	2,023,970	55,326	330,527	155,537	1,203,068	842,923
Barley " doz.	1,027,052	..	..	218,009	1,093,171	1,984,618
Wheat " bus.	32,234,617	7	7	3	17,225,932	34,523,448
Flour " centl.	2,379,151	659,899	65,338	1,999,078	1,127,312	4,670,894
Sugar (cane) ton	391,497	81	236	14,939	58,791	321,425
Wine gal.	3,507,410	700,514	1,093,514	2,041,704	2,157,016	1,368,811
Wool (in terms of greasy wool) centl.	4,125,467	3,154,665	2,869,540	3,220,339	4,375,182	4,823,773
Pearl-shell cwt.	20,877	..	11	674	2,562	1,623
Tallow (unrefined) sup. ft.	167,695	160,771	61,112	3,527	7,202	77,286
Timber, undressed, including Logs (a)	13,188,491	3,199,671	4,784,184	6,566,546	9,029,426	7,064,862
Soap centl.	9,746	3,022	920	3,528	315	3,910

(a) Excludes undressed timber not measured in super. ft.

(ii) *Values.* The values of the principal articles of Australian produce exported to the United Kingdom during the years 1944-45 to 1948-49 compared with the year 1938-39 are shown in the table hereunder :—

PRINCIPAL COMMODITIES EXPORTED TO THE UNITED KINGDOM : VALUES. AUSTRALIA.

(£.)

Article.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Butter	12,127,260	7,355,003	10,989,829	10,961,846	18,998,468	20,667,180
Cheese	1,019,681	232,588	959,282	1,694,561	2,307,637	3,177,808
Eggs in shell	631,976	..	572,156	1,301,317	1,438,515	2,353,188
Meats	10,581,318	6,450,514	7,000,755	15,749,606	17,657,559	21,740,064
Milk and cream	88,116	95,245	94,253	355,669	239,996	399,540
Fruits, dried	2,045,646	2,033,587	966,737	1,331,754	1,764,969	1,334,705
" fresh	1,400,613	69,158	431,184	258,176	2,261,953	1,579,826
" preserved in liquid	1,041,385	159,785	366,304	1,774,797	1,990,006	2,022,704
Barley	278,026	..	..	306,136	2,164,659	2,198,773
Wheat	4,443,613	2	2	2	14,751,498	28,207,766
Flour	705,518	353,685	75,251	3,387,817	2,402,909	9,413,896
Sugar (cane)	3,685,761	2,490	7,629	367,947	1,773,324	10,284,454
Wine	896,659	233,903	374,517	788,635	1,136,208	681,764
Hides and skins	813,201	685,845	1,074,666	1,989,282	1,973,287	2,733,807
Wool	18,513,175	22,982,119	21,524,047	26,376,781	51,967,264	80,495,032
Pearl-shell	90,777	..	180	20,911	56,620	37,807
Tallow (unrefined)	137,464	252,592	118,917	12,646	34,614	519,177
Lead bullion .. .. .	..	..	..	2,050,659	2,685,057	5,064,805
Lead, pig	4,198,486	4,303,491	1,949,419	6,478,830	7,927,031	12,305,526
Zinc bars, etc.	281,454	790,271	127,495	1,385,999	1,504,186	3,113,152
Leather	320,322	451,260	438,921	670,463	750,204	595,010
Timber, undressed, including logs (a)	152,304	90,250	14,875	203,112	319,030	209,506
Soap	21,489	5,914	2,276	5,916	1,959	20,786
Gold	1,990,948	..	26,411,224	..	3,828,787	1,367
Silver	21,794	..	1,233	36,945	1,060,052	1,274,695
All other articles	2,906,840	5,513,167	6,388,858	11,411,742	14,055,381	19,833,267
Total Exports (Australian Produce)	68,393,916	52,060,899	80,020,070	88,921,679	155,087,233	230,725,605

(a) Excludes undressed timber not measured in super. ft.

§ 10. Trade with Eastern Countries.

1. **Principal Articles Exported.**—The following table shows the value of exports of Australian and other produce from Australia to Eastern countries for the years 1938–39 and 1944–45 to 1948–49. The countries concerned in this trade are Borneo (British), Burma, Ceylon, Hong Kong, India, Malaya, Pakistan, Singapore, China and Chinese dependencies, French dependencies in India and Indo-China, Japan, Korea, Indonesia, Philippines Republic, Portuguese Possessions in India and Timor, Siam and Soviet Union Pacific Coast Ports.

TOTAL EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES.

(£.)

Article.	1938–39.	1944–45.	1945–46.	1946–47.	1947–48.	1948–49.
Biscuits	37,353	200,041	389,262	109,174	46,715	7,796
Butter	588,393	391,302	710,901	563,373	680,268	981,622
Cheese	43,555	1,119,051	466,432	473,786	227,004	484,418
Coal	125,740	5	1,050	274	..	..
Fruits—						
Fresh	166,076	8,235	126,010	846,894	923,430	863,703
Dried and preserved	42,981	128,091	355,462	319,435	203,557	300,593
Grain and pulse—						
Wheat	2,402,855	4,977,570	5,350,023	3,799,734	19,660,572	17,065,996
Flour	3,036,957	3,675,023	9,195,601	14,260,164	18,115,710	16,635,933
Other (prepared and unprepared)	70,288	388,581	934,089	2,605,123	1,797,742	4,932,444
Hay, chaff, and compressed fodder	16,186	1,177	9,876	33,083	33,083	34,034
Horses	85,895	100	33,528	136,105	168,890	85,635
Infants' and invalids' food	193,909	195,278	320,034	611,024	874,884	1,120,064
Iron ore	51,477	..	..	..	59,304	79
Iron and steel (scrap)	283,302	..	1,344	12,735	11,601	3,954
Jams and jellies	44,651	434,371	915,986	647,002	336,539	108,215
Lard and refined animal fats	26,248	12,599	37,771	301,938	62,420	23,485
Lead, pig	13,350	639,086	77,231	347,201	255,648	56,600
Leather	134,319	5,308	231,768	831,416	359,717	730,488
Meats—						
Bacon and hams	94,640	284,519	462,082	220,183	308,999	333,155
Other meats	274,015	3,133,218	3,198,501	2,403,707	1,302,893	1,339,179
Milk and cream	430,472	1,102,876	1,572,601	3,051,157	2,784,386	4,059,905
Pearl-shell and trochus-shell	44,445	..	..	9,741	5,384	36,543
Sandalwood	42,330	..	7,584	110,254	33,231	35,621
Skins, hoofs, horns, bones, and shews	176,055	..	719	77,067	11,913	108,832
Tallow (unrefined)	150,105	116,184	147,185	333,040	385,139	413,473
Timber (undressed)	62,893	150	14,848	151,340	152,093	33,684
Wool	4,180,914	1,547,956	1,886,436	3,579,751	3,936,758	8,104,398
Zinc—						
Bars, blocks, ingots, etc.	597,366	794,157	1,146,159	1,256,730	398,398	13,757
Concentrates	14,895	..	..	..	..	..
Other merchandise	1,393,170	3,552,809	13,001,503	23,013,003a	13,901,119	10,832,726
Total merchandise	14,834,785	22,707,688	40,295,675	60,184,608	67,031,303	68,740,922
Specie, and gold and silver bullion	935,005	40	411,099	719	57	145,537
Total Exports	15,769,790	22,707,728	40,710,664	60,185,327	67,031,480	68,886,459

(a) Includes yarns, textiles and apparel, £4,502,530, and metals and machinery, £5,872,565.

2. **Destination of Exports of Merchandise.**—The next table shows the destination of merchandise exported to Eastern countries during the year 1938–39 and the years 1944–45 to 1948–49.

EXPORTS OF MERCHANDISE FROM AUSTRALIA TO EASTERN COUNTRIES.

(£.)

Country of Destination.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
British Countries—						
Borneo	13,148	..	736,193	575,221	390,336	362,225
Ceylon	422,739	6,839,755	6,948,555	7,115,865	10,213,218	9,341,191
Hong Kong	475,263	..	3,337,201	6,621,887	6,364,636	3,918,074
India	1,941,696	15,798,539	18,044,675	13,028,924	26,688,876	25,985,337
Malaya	1,911,007	..	6,513,742	18,352,714	7,785,059	6,298,827
Pakistan .. .. .	..	..	..	..	..	2,272,791
Singapore .. .. .	..	..	..	..	6,481,396	7,372,107
Foreign Countries—						
Burma	59,228	160	300,244	1,241,121	1,992,128	796,288
China	5,022,571	226	885,226	6,067,211	2,756,945	1,438,511
Chinese Dependencies—						
Kwantung	61,402	..	..	30	..	..
Manchuria	2,048	..	..	..	..	..
French Dependencies—						
India	719	..	..	118	..	10,956
Indo-China	55,385	..	83,351	406,727	684,514	287,405
Japan	4,865,469	..	1,778,076	5,594,079	2,505,957	7,388,693
Korea	12,282	..	..	..	376,871	115,590
Netherlands Dependencies—						
Indonesia	1,373,197	66,551	1,394,695	485,865	131,590	1,140,336
Philippines Republic	498,893	2,457	116,241	453,761	256,379	514,404
Portuguese Dependencies—						
India	244	..	148,102	96,170	81,656	221,153
Timor .. .. .	..	..	7,296	34,632	76,253	16,248
Siam (Thailand) ..	119,494	..	2,078	110,247	245,524	590,811
Soviet Russia (Pacific Ports)	..	..	..	36	55	675,675
Total	14,834,785	22,707,688	40,295,675	60,184,608	67,031,393	68,746,922

3. Imports of Merchandise from Eastern Countries.—The values of imports into Australia from Eastern countries during the year 1938-39 and the years 1944-45 to 1948-49 are shown in the following table. The principal commodities imported in 1948-49, according to the countries of origin, were :—Ceylon—Tea, £6,683,809; India—Bags and Sacks, £12,464,469, Cotton and Linen piecegoods, £2,406,000, Hessians, £2,121,589; Japan—Raw Silk, £401,528, Rayon, £129,317; Indonesia—Kerosene, £2,181,798, Petroleum Spirit, £5,689,602, Residual Oil, £2,745,507.

IMPORTS OF MERCHANDISE INTO AUSTRALIA FROM EASTERN COUNTRIES.

(£.)

Country of Origin.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
British Countries—						
Borneo	215,061	..	312,062	1,474,714	3,414,099	4,144,837
Ceylon	957,277	4,498,505	5,763,747	6,570,342	8,133,336	7,511,059
Hong Kong	40,546	41	11,752	120,774	251,687	647,516
India	3,272,139	18,405,686	11,442,394	17,443,847	26,697,994	25,861,897
Malaya	1,028,758	579	7,035	3,139,772	3,802,504	4,028,056
Pakistan .. .. .	..	..	..	..	..	102,120
Singapore .. .. .	..	..	..	..	391,678	4,655,364
Foreign Countries—						
Burma	29,952	1,895	319	15,013	22,735	26,693
China	526,177	4,341	95,550	1,147,940	1,667,335	2,541,953
Chinese Dependencies—						
Formosa .. .. .	..	..	..	868	..	..
Kwantung	146	..	..	..	..	..
Manchuria	16,825	..	..	34	I	..
French Dependencies—						
India	634	2	..	18,027	1,289	..
Indo-China	971	..	101	18,709	1,804	14,362
Japan	4,666,238	5	2,600	696,809	1,433,127	1,710,551
Korea	23	..	..	155	576	7
Netherlands Dependencies—						
Indonesia	8,116,555	24,592	71,062	213,434	4,429,139	11,096,867
Philippines Republic	137,682	315	645	3,779	48,181	14,009
Portuguese Dependencies—						
India	35	..	..	..	..	..
Timor .. .. .	..	..	..	2,719	9	76
Siam (Thailand) ..	3,432	..	84	15,790	19,651	26,678
Soviet Russia (Pacific Ports)	..	..	..	122	8,884	535
Total	19,012,451	22,935,961	17,708,251	30,882,845	50,384,020	62,383,180

The balance of trade with Eastern countries, which can be ascertained by comparison with the previous table, shows an excess of imports into Australia during the years 1938-39 and 1944-45, and an excess of exports during the years 1945-46 to 1948-49.

§ 11. Classified Summary of Australian Oversea Trade.

1. Imports.—The following table shows, according to statistical classes, the value of imports into Australia during each of the years 1944-45 to 1948-49 compared with the year 1938-39.

IMPORTS INTO AUSTRALIA : CLASSES. (£.)

Class.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
I. Animal foodstuffs, etc. ..	1,823,803	1,266,566	936,507	1,501,780	3,696,165	3,961,370
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	4,511,860	6,497,060	8,809,906	9,472,176	16,520,830	13,932,667
III. Alcoholic liquors, etc. ..	820,762	394,363	339,312	381,101	762,354	984,863
IV. Tobacco, etc. ..	2,124,831	3,531,078	5,338,338	4,187,720	7,721,388	9,182,059
V. Live animals ..	208,402	87,236	243,136	442,803	384,879	486,888
VI. Animal substances, etc. ..	2,214,204	765,467	1,034,662	3,439,702	3,439,543	2,926,404
VII. Vegetable substances, etc. ..	2,064,511	6,478,388	7,134,771	9,155,310	11,170,311	13,150,323
VIII. Apparel, textiles, etc. ..	20,241,952	45,352,638	31,709,946	48,921,043	96,065,101	109,107,688
IX. Oils, fats and waxes ..	9,915,436	20,657,925	20,765,586	20,662,000	34,756,532	43,179,355
X. Paints and varnishes ..	662,040	560,601	1,008,148	1,074,681	1,638,485	1,909,113
XI. Stones and minerals, etc. ..	1,027,031	1,629,610	1,559,828	2,421,578	2,837,113	3,637,527
XII. Metals, metal manufactures, and machinery ..	35,652,840	75,174,893	46,250,262	52,612,048	85,378,948	128,035,543
XIII. Rubber and leather, etc. ..	1,926,142	1,814,416	3,042,620	5,584,178	5,352,188	6,605,123
XIV. Wood and wicker, etc. ..	2,371,178	1,383,399	1,922,792	3,702,014	4,876,815	8,130,764
XV. Earthenware, etc. ..	2,122,650	1,304,241	2,112,875	3,644,596	7,250,489	7,811,593
XVI. Paper and stationery ..	7,051,557	7,417,171	8,172,884	13,409,947	23,383,243	21,060,945
XVII. Jewellery, etc. ..	1,633,030	495,479	1,438,709	3,052,169	4,130,770	4,914,539
XVIII. Optical, surgical, and scientific instruments ..	1,824,665	1,903,656	2,351,545	2,924,665	4,410,447	5,848,521
XIX. Drugs, chemicals, etc. ..	6,382,351	6,281,701	7,083,396	9,577,915	11,035,975	13,177,918
XX. Miscellaneous (a) ..	7,742,730	29,094,643	25,540,368	12,051,961	12,973,848	17,095,687
XXI. Gold and silver; and bronze specie ..	3,537,036	2,916,891	1,761,502	1,142,427	1,660,874	1,138,410
Total	116,754,029	215,007,629	178,857,096	209,484,823	339,746,128	415,194,200

(a) Includes Arms, Ammunition and Explosives.

2. Exports.—In the following table the exports from Australia are shown according to the same classification as for imports, distinguishing (A) Australian produce; (B) Other produce (re-exports); and (C) Total exports.

EXPORTS FROM AUSTRALIA : CLASSES. (£.)

Class.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
A. AUSTRALIAN PRODUCE.						
I. Animal foodstuffs, etc. ..	27,222,912	27,920,019	34,071,228	47,362,238	57,695,872	73,233,176
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	25,532,970	28,679,708	36,853,506	52,328,828	123,993,668	156,225,408
III. Alcoholic liquors, etc. ..	1,138,421	1,800,000	1,013,043	2,311,179	2,203,702	1,553,008
IV. Tobacco, etc. ..	237,948	761,255	644,526	216,762	157,787	141,429
V. Live animals ..	197,081	50,016	117,241	369,451	491,158	444,111
VI. Animal substances, etc. ..	47,149,519	56,149,666	81,200,033	141,858,800	161,751,000	244,801,081
VII. Vegetable substances, etc. ..	292,000	988,119	1,003,052	1,178,167	1,028,502	908,794
VIII. Apparel, textiles, etc. ..	446,932	1,663,471	6,381,619	10,158,220	4,786,772	3,530,709
IX. Oils, fats and waxes ..	611,633	1,347,008	943,011	928,557	1,389,143	2,337,034
X. Paints and varnishes ..	173,399	103,022	147,379	370,347	607,944	403,870
XI. Stones and minerals, etc. ..	2,667,077	2,538,073	1,948,096	3,420,675	5,149,128	6,424,902
XII. Metals, metal manufactures and machinery ..	9,510,802	11,281,077	14,256,633	27,864,190	28,385,141	37,190,385
XIII. Rubber and leather, etc. ..	715,199	1,000,421	1,508,530	1,910,174	1,910,135	1,802,304
XIV. Wood and wicker, etc. ..	1,066,288	475,596	866,186	1,221,617	1,673,343	1,962,946
XV. Earthenware, etc. ..	209,637	320,860	435,286	654,439	495,772	374,088
XVI. Paper and stationery ..	361,008	461,138	534,381	1,008,225	753,103	854,393
XVII. Jewellery, etc. ..	105,803	84,716	210,386	524,201	364,451	312,766
XVIII. Optical, surgical, and scientific instruments ..	150,709	254,515	422,247	582,553	700,998	743,332
XIX. Drugs, chemicals, etc. ..	717,667	1,521,536	2,048,002	4,484,779	3,143,487	2,786,906
XX. Miscellaneous (a) ..	915,711	12,128,839	5,812,845	4,695,560	3,251,744	4,088,833
XXI. Gold and silver; and bronze specie ..	15,951,167	9,611,000	26,533,603	79,108	4,940,851	1,396,569
Unrecorded Exports (Estimated) ..	..	2,000,000	..	..	..	..
Total	135,475,761	151,605,108	218,820,784	304,453,566	404,715,685	541,259,244

(a) Includes Arms, Ammunition and Explosives.

EXPORTS FROM AUSTRALIA: CLASSES—continued.

(£.)

Class.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
B. OTHER PRODUCE: RE-EXPORTS.						
I. Animal foodstuffs, etc. ..	28,537	196,055	622,376	224,168	94,204	111,566
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	66,886	171,050	333,555	374,356	188,884	248,275
III. Alcoholic liquors, etc. ..	42,820	14,591	76,954	30,103	21,948	32,621
IV. Tobacco, etc. ..	112,997	58,407	93,820	8,073	64,308	167,394
V. Live animals ..	19,687	724	6,523	5,825	11,078	10,690
VI. Animal substances, etc. ..	136,279	12,492	27,073	84,061	50,044	25,948
VII. Vegetable substances, etc. ..	9,092	4,377	11,956	23,684	66,826	58,695
VIII. Apparel, textiles, etc. ..	222,819	657,184	748,009	493,399	2,084,709	321,175
IX. Oils, fats and waxes ..	101,711	2,051,608	1,473,116	671,038	673,423	465,552
X. Paints and varnishes ..	4,853	1,047	3,563	8,814	9,006	3,063
XI. Stones and minerals, etc. ..	2,443	8,359	820	26,930	51,637	16,989
XII. Metals, metal manufactures, and machinery ..	547,549	117,646	382,396	1,310,224	1,170,946	1,658,488
XIII. Rubber and leather, etc. ..	10,873	1,184	6,048	126,246	51,141	9,640
XIV. Wood and wicker, etc. ..	42,987	10,670	5,702	14,281	56,833	50,120
XV. Earthenware, etc. ..	9,428	3,806	7,929	27,123	20,487	20,393
XVI. Paper and stationery ..	128,388	12,316	49,245	115,890	96,710	105,766
XVII. Jewellery, etc. ..	74,188	5,004	33,850	33,465	27,136	82,740
XVIII. Optical, surgical, and scientific instruments ..	234,004	19,826	52,300	99,674	165,027	198,279
XIX. Drugs, chemicals, etc. ..	48,518	57,280	45,533	179,046	128,155	137,674
XX. Miscellaneous ..	164,647	262,755	155,886	677,371	181,488	1,173,063
XXI. Gold and silver; and bronze specie ..	3,011,845	..	330,172	40,695	24,654	173,120
Total	5,020,551	3,666,381	4,466,826	4,575,066	5,238,644	5,071,251

C. TOTAL EXPORTS: AUSTRALIAN PRODUCE AND RE-EXPORTS.

I. Animal foodstuffs, etc. ..	27,251,449	28,116,074	34,693,604	47,586,406	57,790,076	73,344,742
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	25,599,856	28,850,758	37,187,061	52,703,184	124,182,552	156,473,683
III. Alcoholic liquors, etc. ..	1,201,244	1,834,884	2,008,967	2,104,282	2,085,651	1,568,229
IV. Tobacco, etc. ..	350,945	819,662	738,346	224,835	222,095	308,823
V. Live animals ..	216,768	50,740	123,764	375,270	502,236	454,801
VI. Animal substances, etc. ..	47,328,798	56,207,188	81,227,098	141,982,427	161,782,964	244,527,629
VII. Vegetable substances, etc. ..	306,956	987,796	1,015,009	1,202,091	1,095,388	967,489
VIII. Apparel, textiles, etc. ..	668,841	2,320,655	7,129,028	10,681,710	6,871,481	3,851,584
IX. Oils, fats and waxes ..	713,344	3,398,616	2,416,127	1,599,595	2,062,566	2,802,586
X. Paints and varnishes ..	178,252	104,069	150,942	379,161	616,950	466,933
XI. Stones and minerals, etc. ..	2,669,520	2,546,432	1,948,916	3,447,605	5,200,765	6,441,891
XII. Metals, metal manufactures and machinery ..	10,058,351	11,398,723	14,639,029	29,174,414	29,556,087	38,848,873
XIII. Rubber and leather, etc. ..	756,063	1,007,368	1,534,693	3,159,010	1,961,276	1,811,944
XIV. Wood and wicker, etc. ..	1,109,275	486,266	901,888	1,235,898	1,730,176	2,013,066
XV. Earthenware, etc. ..	129,065	324,675	443,215	681,562	516,259	394,481
XVI. Paper and stationery ..	493,316	473,498	583,599	1,124,115	849,813	960,150
XVII. Jewellery, etc. ..	179,991	89,720	244,236	557,666	391,587	395,506
XVIII. Optical, surgical, and scientific instruments ..	384,713	274,341	474,547	682,227	866,025	941,611
XIX. Drugs, chemicals, etc. ..	766,185	1,578,819	2,994,435	4,664,425	3,271,642	2,924,580
XX. Miscellaneous (a) ..	1,080,358	12,391,594	5,968,731	5,372,931	3,433,232	5,261,896
XXI. Gold and silver; and bronze specie ..	18,963,012	9,611	26,863,775	119,803	4,965,508	1,569,689
Unrecorded Exports (Estimated) ..	..	2,000,000	..	..	..	..
Total	140,496,312	155,271,489	223,287,610	309,028,632	409,954,329	546,330,495

(a) Includes Arms, Ammunition and Explosives.

3. Imports of Principal Articles.—The next table shows the quantity, where available, and the value of the principal articles imported into Australia during the years 1944-45 to 1948-49 compared with the year 1938-39. The articles are shown in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES IMPORTED : AUSTRALIA.

Article.		1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Fish, preserved in tins	lb.	28,902,983	12,439,213	5,955,086	8,379,009	20,572,917	19,563,423
Tea	lb.	1,078,755	733,805	400,704	644,326	2,288,253	2,445,025
Whisky	pl.gal.	49,530,941	44,238,428	51,061,376	52,830,507	54,522,049	42,570,780
Tobacco and preparations thereof	pl.gal.	2,830,487	4,208,545	5,182,625	6,397,846	10,189,590	8,127,771
Copra	cwt.	523,346	219,100	266,092	174,972	286,230	220,216
Fibres	cwt.	631,033	3,86,804	333,215	314,356	490,130	429,928
Hides and skins	cwt.	1,24,831	3,531,072	5,338,335	4,187,720	7,721,358	9,182,059
Pulp for paper-making	ton	484,181	313,293	273,649	181,238	470,135	583,022
Seeds	cwt.	793,587	308,465	209,074	230,826	755,825	1,390,223
Socks and stockings	cwt.	1,023,441	2,791,475	2,530,420	4,350,533	5,441,710	6,594,405
Gloves	cwt.	37,704	37,944	39,114	37,323	52,041	103,973
Hats and caps	cwt.	366,564	804,965	973,157	979,498	2,091,462	2,523,118
Trimnings and ornaments	cwt.	587,874	1,791,678	2,037,611	1,581,412	1,315,005	1,920,411
Other apparel and attire	cwt.	49,599	1,727	534	20,562	693,580	2,644,120
Carpets and carpeting	cwt.	420,050	22,879	117,312	297,336	743,461	633,122
Floorcloths and linoleums	cwt.	204,511	202,024	134,898	313,317	447,591	558,551
Piece goods—	cwt.	440,035	333,024	666,126	1,603,604	2,715,093	2,239,936
Canvas and duck	cwt.	1,011,703	1,318,208	524,821	1,117,988	2,253,553	4,454,234
Cotton and linen	cwt.	1,253,690	53,197	479,474	2,055,521	4,994,897	5,510,016
Silk and rayon	cwt.	641,129	450	177,259	644,927	2,017,518	2,786,384
Woolen or containing wool	cwt.	649,330	1,373,213	1,115,040	955,299	1,100,261	1,348,780
All other piece goods	cwt.	5,501,674	20,487,994	10,275,759	12,364,467	27,010,288	30,960,983
Sewing silks, cottons, etc.	cwt.	2,991,495	7,416,082	7,110,042	12,353,212	20,186,008	17,045,686
Bags and sacks	cwt.	321,779	429,580	333,035	565,617	1,346,679	4,150,696
Yarns—	cwt.	1,799,304	2,121,004	2,253,869	2,813,872	5,048,539	5,387,213
Rayon	cwt.	573,179	879,362	665,564	683,906	1,155,615	2,324,565
Cotton	cwt.	1,720,965	6,077,390	2,179,789	5,785,451	12,619,995	12,539,246
Woollen	cwt.	609,134	1,447,311	1,671,875	1,653,494	4,327,977	5,324,271
Other	cwt.	440,534	1,832,864	1,168,404	1,490,822	4,015,432	4,120,000
Oils, in bulk—	cwt.	55,192	20,059	173	7,075	90,436	725,203
Kerosene	gal.	71,546	103,390	153,878	129,078	277,779	113,483
Lubricating (mineral)	gal.	54,714,472	90,976,098	91,347,591	84,112,406	114,409,936	111,407,858
Petroleum, including crude	gal.	753,424	1,686,186	1,671,641	1,815,359	3,623,616	4,051,270
Residual and solar	gal.	15,510,342	20,359,300	10,090,587	20,375,543	20,289,101	39,942,390
Iron and steel—	ton	800,181	2,250,849	1,017,840	2,013,408	3,034,443	3,702,270
Pipes and tubes	ton	309,517,000	287,281,305	4,86,735	11,09,140	48,341,051	560,424,813
Plate and sheet	ton	6,450,791	8,173,200	8,222,120	10,030,780	10,340,640	21,272,704
Cutlery and platedware	ton	130,188,368	116,021,131	387,011,372	233,900,681	290,041,726	390,040,416
Tools of trade	ton	1,060,060	7,264,253	7,335,389	4,490,816	7,305,094	10,090,468
Motor cars, chassis, bodies, and parts	ton	514,304	106,293	126,687	73,952	171,742	320,559
Electrical machinery and appliances	ton	2,080,282	5,100,138	3,520,400	4,893,355	6,30,356	8,543,753
Electrical cable and wire, covered	cwt.	59,795	581,504	700,810	1,491,593	2,130,132	1,587,525
Agricultural machinery	ton	971,230	1,046,615	1,323,872	1,079,110	2,361,165	2,294,560
Metal-working machinery	ton	8,577,103	10,170,156	7,025,188	13,750,604	20,749,580	34,306,470
Motive-power machinery	ton	4,193,781	6,593,793	5,003,020	4,861,127	8,191,026	13,222,020
Rubber and rubber manufactures	ton	285,004	90,341	60,507	101,444	1,01,412	296,824
Timber, undressed, including logs (a)	sup. ft.	1,107,230	734,918	691,057	603,138	1,871,388	3,084,830
Crockery	ton	280,526	91,153	101,451	111,109	827,780	802,549
Glass and glassware	ton	1,508,118	1,180,000	751,707	1,774,855	4,282,510	3,710,950
Paper, printing	ton	2,844,624	1,049,080	2,005,576	6,183,118	8,507,276	14,080,267
Stationery and paper manufactures	ton	1,701,717	1,770,100	2,070,837	3,38,001	4,02,346	6,295,870
Cinematograph films	lin. ft.	31,008,402	85,000,588	102,318,227	121,381,071	134,121,071	218,813,240
Drugs, chemicals, and fertilizers	ton	1,088,325	1,050,133	1,170,185	3,055,082	3,576,206	5,407,346
Arms and explosives	ton	617,161	610,050	680,700	1,119,517	2,018,288	3,018,288
Musical instruments, pianos, etc.	ton	912,536	514,110	672,875	1,420,017	3,049,046	2,711,704
All other articles	ton	3,069,780	2,181,518	2,869,512	5,111,149	7,107,211	6,023,518
Total Imports	£	116,754,029	215,007,620	178,857,096	209,484,823	339,746,128	415,194,200

(a) Excludes undressed timber not measured in super. ft.

4. Exports of Principal Articles of Australian Produce.—(i) *Quantities.* The following table shows the quantities of the principal articles of Australian produce exported during the years 1944-45 to 1948-49 compared with the year 1938-39. The articles are shown in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES EXPORTED : QUANTITIES, AUSTRALIA.

Article.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Butter	centl. 2,295,428	937,391	1,376,113	1,335,423	1,847,738	1,835,520
Cheese	359,236	335,138	327,662	335,553	509,445	582,359
Eggs in shell	doz. 10,144,344	520,910	7,291,224	17,493,879	14,518,033	19,604,507
Beef	centl. 2,719,638	612,097	1,107,913	1,803,385	2,371,501	1,916,531
Lamb	1,583,327	1,087,725	390,468	1,120,945	1,030,888	873,548
Mutton	281,558	379,176	175,278	522,084	193,941	275,090
Pork	307,164	398,818	307,729	387,053	37,281	201,259
Milk and cream	191,039	408,711	641,886	1,038,742	(b) 932,832	(b) 980,520
Fruits—						
Dried	1,681,270	1,752,577	911,710	957,033	967,591	1,184,484
Fresh	2,752,381	179,297	813,179	673,485	1,899,803	1,509,330
Barley	1,309,084	90,736	351,052	1,127,798	4,025,008	5,438,162
Wheat	63,129,023	32,391,450	12,484,156	12,175,543	60,173,560	83,129,458
Flour	14,501,304	11,194,089	10,377,511	15,301,953	15,687,411	17,036,031
Sugar (cane)	ton 443,014	114,011	150,972	117,004	100,351	115,104
Wine	3,719,941	1,550,048	1,784,436	2,720,547	2,618,303	1,877,536
Tobacco, manufactured	centl. 9,605	13,485	10,183	6,247	3,778	6,001
Wool (in terms of greasy wool)	9,469,604	6,736,588	9,161,443	14,329,055	11,216,350	13,203,770
Pearl-shell	cwt. 52,532	401	2,859	5,335	15,915	27,885
Sandalwood	32,062	..	142,069	2,946	3,117	..
Tallow (unrefined)	562,500	421,584	141,832	60,243	68,540	142,179
Coal	382,085	189,198	75,883	44,375	67,228	36,913
Ores and concentrates	cwt. 5,016,685	4,982,482	4,621,106	4,780,065	4,577,737	4,139,114
Copper	21,555	3,597	142,069	37,143	37,803	..
Lead, pig	4,099,019	4,017,224	2,090,293	2,550,664	2,255,470	2,549,002
Zinc—bars, blocks, slabs, ingots	892,630	1,203,580	963,804	916,277	500,297	700,584
Tin—ingots	29,431	9,680	5,012	265	14	I
Timber, undressed, including logs (a)	sup. ft. 77,833,352	14,471,849	21,754,664	27,935,061	23,813,186	24,794,384
Soap	centl. 49,871	99,779	183,053	123,700	23,599	37,619

(a) Excludes undressed timber not measured in super. ft. (b) Excludes particulars of Infants' and Invalids' Foods (essentially of Milk) included for previous years.

(ii) *Values.* The values of the principal articles of Australian produce exported during the years 1944-45 to 1948-49 compared with the year 1938-39 are shown in the following table :—

PRINCIPAL COMMODITIES EXPORTED : VALUES, AUSTRALIA.

(£s.)

Article.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Butter	12,891,837	8,249,506	12,271,662	12,569,922	20,629,483	23,806,460
Cheese	1,073,931	1,975,113	1,688,700	2,643,355	3,253,273	4,096,930
Eggs in shell	638,159	51,551	638,014	1,416,549	1,575,073	2,300,381
Meats	11,776,637	14,094,530	14,005,015	21,130,318	22,583,235	29,723,505
Milk and cream	791,911	1,780,297	2,307,444	4,341,963	(b) 4,608,041	(b) 5,546,604
Fruits—						
Dried	2,864,676	3,571,171	2,149,220	2,429,584	2,543,140	3,449,502
Fresh	2,022,874	318,351	1,264,681	1,549,890	3,886,059	3,116,571
Preserved in liquid	1,267,070	508,108	891,001	2,114,248	2,762,790	4,131,554
Barley	341,935	57,277	359,741	1,636,020	8,134,000	6,864,173
Wheat	8,734,974	9,754,156	6,223,325	6,338,389	52,812,541	67,041,762
Flour	4,540,210	6,731,717	11,330,621	22,534,957	31,823,013	35,042,310
Sugar (cane)	4,177,584	1,853,628	3,059,599	2,712,052	3,062,450	3,199,399
Wine	981,143	595,278	740,588	1,181,482	1,429,768	991,822
Tobacco, manufactured	225,025	474,438	373,222	220,686	138,482	124,762
Hides and skins	4,094,754	6,591,200	11,833,201	15,423,238	12,346,521	12,205,406
Wool	42,629,461	40,386,611	69,260,397	126,103,960	148,737,915	231,395,766
Pearl-shell	244,266	5,198	16,917	149,975	408,681	606,767
Sandalwood	42,330	7,584	110,267	35,571	35,633	..
Tallow (unrefined)	483,034	669,490	303,480	317,002	461,739	905,344
Coal	347,054	223,677	92,761	54,754	108,733	97,353
Ores and concentrates	1,846,931	1,753,509	1,738,589	3,169,438	4,412,224	5,460,096
Copper	15,656	26,312	606,430	177,190	219,804	147,280
Lead, pig	4,266,566	5,556,418	4,075,098	8,598,565	10,909,053	16,348,900
Zinc—bars, blocks, slabs, ingots	887,121	1,870,193	2,162,504	2,713,001	1,821,509	3,254,244
Tin, ingots	370,137	181,430	96,231	5,201	384	25
Leather	626,198	559,970	925,049	1,961,284	1,460,421	1,565,866
Timber, undressed, including logs (a)	926,501	350,512	591,110	780,011	708,968	883,981
Soap	74,594	277,649	478,865	360,277	103,252	184,207
Gold	14,958,633	..	26,441,290	1,232	3,830,938	4,281
Silver	992,486	9,485	38,759	77,164	1,100,830	1,392,107
All other articles	10,342,670	32,115,333	42,722,329	61,632,162	58,729,794	67,216,341
Unrecorded Exports (Estimated) .. .. .	..	2,000,000	..	..	..	..
Total Exports (Australian Produce)	135,475,761	151,605,108	218,820,784	304,453,566	404,715,685	541,259,244

(a) Excludes undressed timber not measured in super. ft. (b) Excludes particulars of Infants' and Invalids' Foods (essentially of Milk) included for previous years.

5. Imports of Merchandise, Specie and Bullion.—The table hereunder shows the value of imports into Australia, during each of the years 1944-45 to 1948-49 compared with the year 1938-39, grouped under the headings—Merchandise, and Specie and Bullion. The imports of merchandise are shown under the sub-headings of "free" and "dutiable" goods :—

IMPORTS OF MERCHANDISE, SPECIE, AND BULLION : AUSTRALIA.

(£.)

Year.	Merchandise.			Specie and Bullion.	Total Imports.
	Free Goods.	Dutiable Goods.	Total Merchandise.		
1938-39 ..	46,358,322	66,858,671	113,216,993	3,537,036	116,754,029
1944-45 ..	170,780,451	41,310,287	212,090,738	2,916,891	215,007,629
1945-46 ..	118,565,992	58,529,602	177,095,594	1,761,502	178,857,096
1946-47 ..	98,282,215	110,060,181	208,342,396	1,142,427	209,484,823
1947-48 ..	143,894,126	194,191,128	338,085,254	1,660,874	339,746,128
1948-49 ..	179,202,477	234,853,313	414,055,790	1,138,410	415,194,200

6. Exports of Merchandise, Specie and Bullion.—The next table shows the recorded value of exports from Australia during the years 1944-45 to 1948-49 compared with the year 1938-39, grouped under the headings—Merchandise, and Specie and Bullion, showing the exports of Australian Produce and Other Produce separately :—

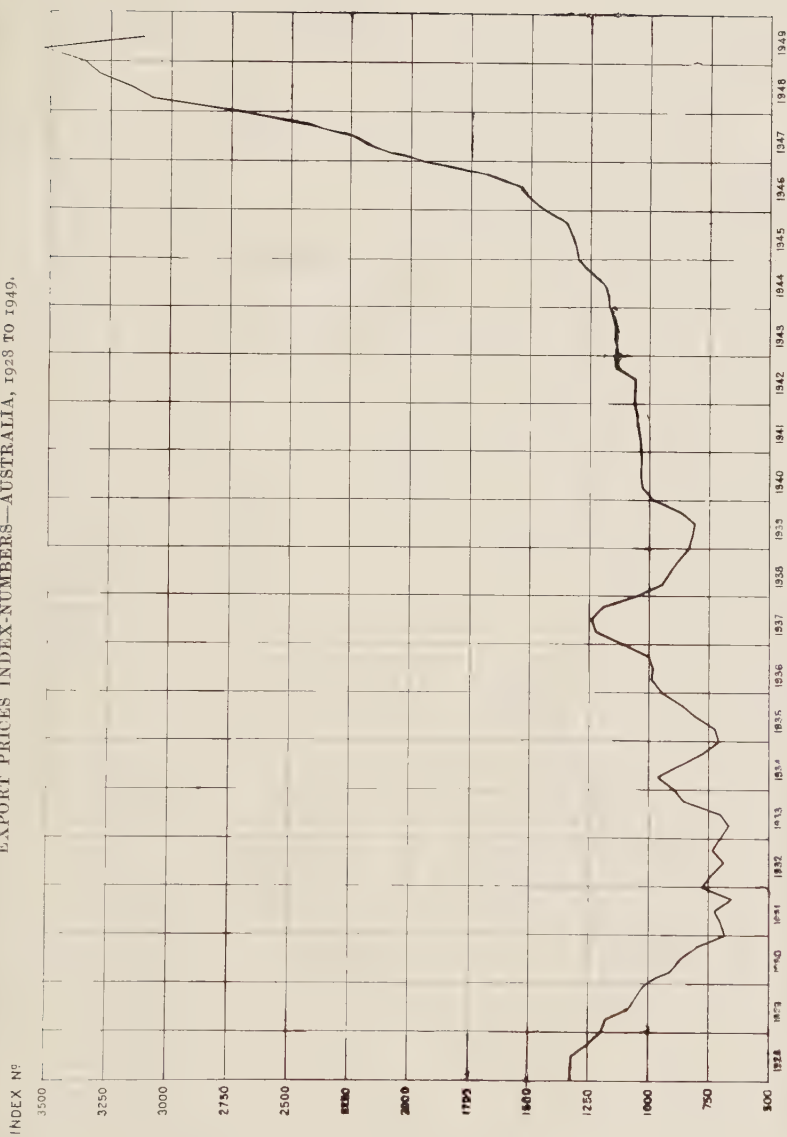
EXPORTS OF MERCHANDISE, SPECIE AND BULLION : AUSTRALIA.

(£.)

Year.	Merchandise.			Specie and Bullion.			Total.
	Australian Produce.	Other Produce.	Total.	Australian Produce.	Other Produce.	Total.	
1938-39 ..	119,524,594	2,008,706	121,533,300	15,951,167	3,011,845	18,963,012	140,496,312
1944-45 ..	151,595,497	3,666,381	155,261,878	9,611	..	9,611	155,271,489
1945-46 ..	192,287,181	4,136,654	196,423,835	26,533,603	330,172	26,863,775	223,287,610
1946-47 ..	304,374,458	4,534,371	308,908,829	79,108	40,695	119,803	309,028,632
1947-48 ..	399,774,831	5,213,990	404,988,821	4,940,854	24,654	4,965,508	409,954,329
1948-49 ..	539,862,675	4,898,131	544,760,806	1,396,569	173,120	1,569,689	546,330,495

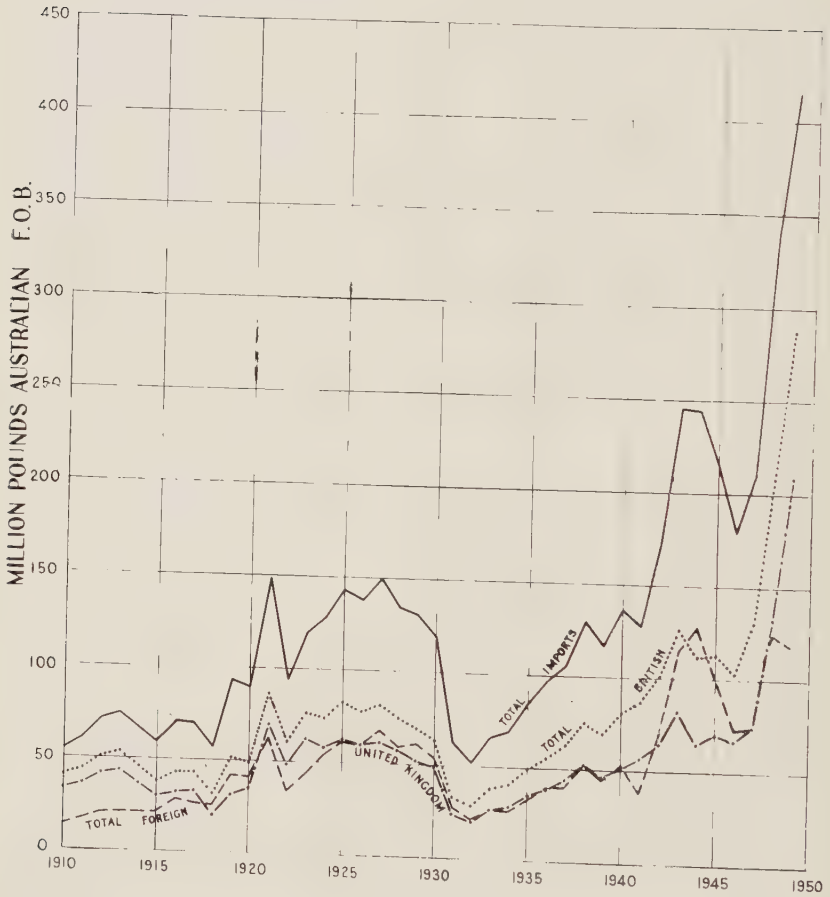
7. Imports in Tariff Divisions.—In the following table the imports into Australia during the years 1944-45 to 1948-49 compared with the year 1938-39 have been classified in accordance with the sixteen divisions of the Customs Tariff.

EXPORT PRICES INDEX-NUMBERS—AUSTRALIA, 1928 TO 1949.

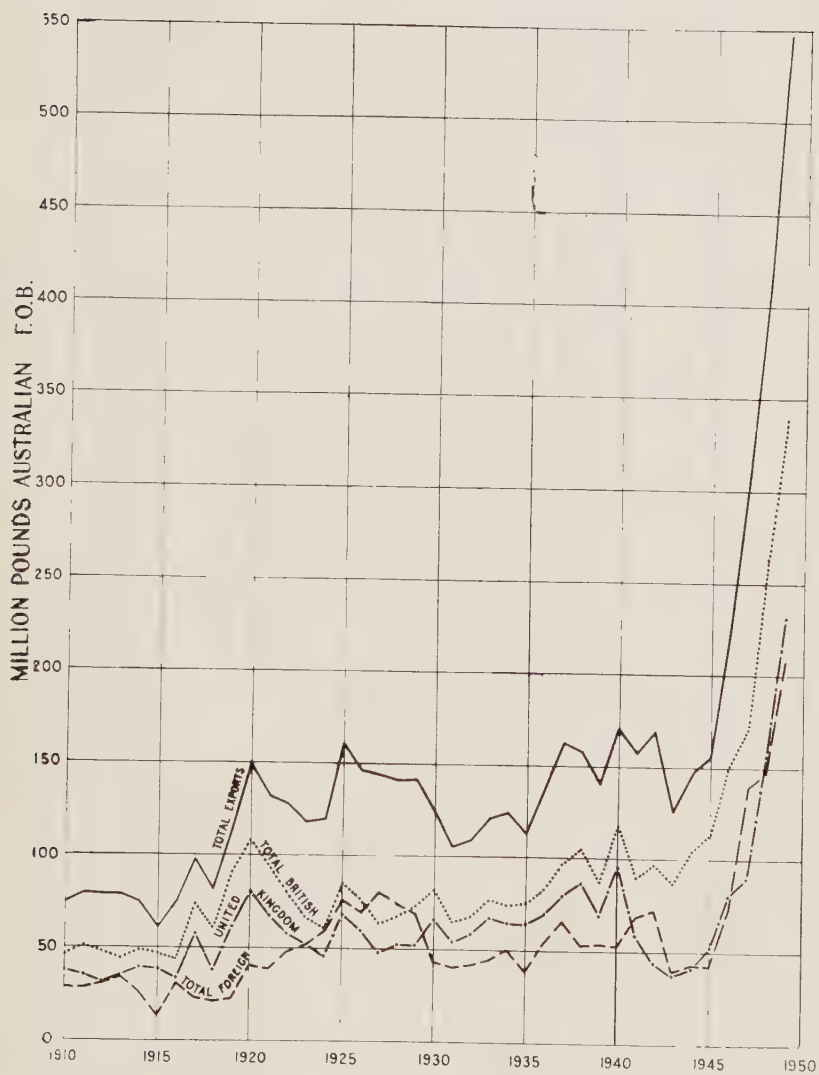


EXPLANATION.—This graph represents the Fixed Base series of Export Price Index-Numbers computed quarterly with the average for the three years ended June, 1939 as base (=1,000).

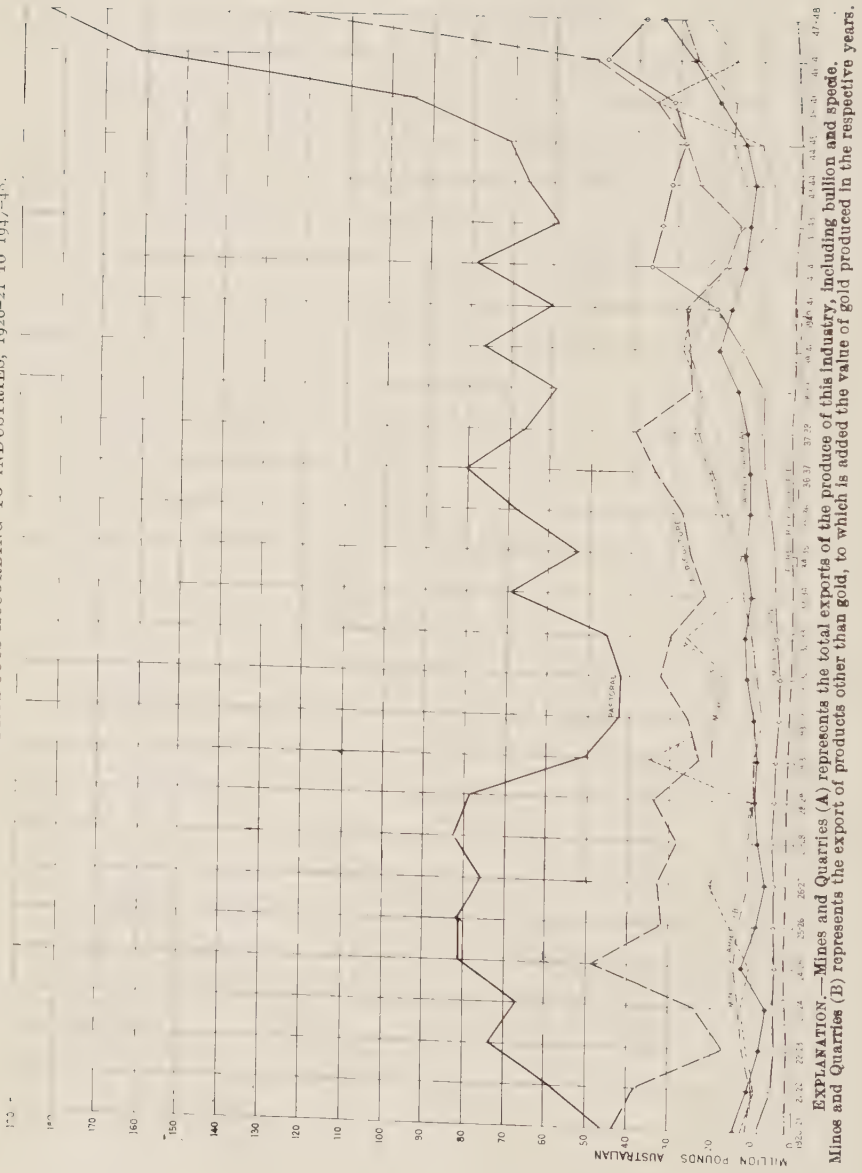
IMPORTS INTO AUSTRALIA, 1910 TO 1949



EXPORTS FROM AUSTRALIA, 1910 TO 1949.



EXPORTS OF AUSTRALIAN PRODUCTS ACCORDING TO INDUSTRIES, 1920-21 TO 1947-48.



IMPORTS CLASSIFIED ACCORDING TO DIVISIONS OF THE TARIFF : AUSTRALIA.

(£.)

Tariff Division.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
I. Ale, Spirits, and Beverages ..	1,041,967	1,124,765	512,337	540,970	1,087,211	1,326,677
II. Tobacco and Preparations thereof	2,124,831	3,531,078	5,124,697	4,114,441	7,725,907	9,186,379
III. Sugar ..	45,039	17,334	19,192	189,303	48,921	40,713
IV. Agricultural Products and Groceries ..	7,217,988	9,233,027	10,180,141	12,504,557	22,834,379	21,499,259
V. Textiles, Felts and Furs, and Manufactures thereof and Attire ..	18,150,192	41,014,379	23,334,060	42,428,306	81,429,582	94,888,675
VI. Metals and Machinery ..	25,271,834	50,287,127	13,431,795	24,236,051	44,869,199	80,103,389
VII. Oils, Paints and Varnishes ..	10,898,215	21,510,834	15,766,014	20,087,367	34,277,082	44,902,665
VIII. Earthenware, Cement, China Glass and Stone ..	2,631,754	1,737,508	2,179,150	3,947,533	7,510,221	7,956,592
IX. Drugs and Chemicals ..	4,000,329	4,650,664	4,418,231	6,836,767	7,533,585	8,112,362
X. Wood, Wicker and Cane ..	2,410,782	1,389,015	1,328,735	3,382,131	4,480,507	8,251,139
XI. Jewellery and Fancy Goods ..	2,332,380	1,467,718	1,857,010	3,789,211	4,909,816	6,670,935
XII. Hides, Leather and Rubber ..	2,137,099	2,000,747	2,742,941	5,521,018	5,911,538	7,852,612
XIII. Paper and Stationery ..	7,370,510	7,560,621	5,609,856	11,792,438	20,116,914	20,071,874
XIV. Vehicles ..	10,560,164	41,273,951	3,013,021	15,375,503	23,759,972	41,817,363
XV. Musical Instruments ..	325,627	11,032	35,761	146,493	420,932	655,298
XVI. Miscellaneous ..	16,083,082	25,190,938	87,482,653	53,450,307	71,119,488	60,719,858
Total, Merchandise ..	113,216,993	212,090,738	177,095,594	208,342,396	338,085,254	414,055,790
Total, Specie and Bullion ..	3,537,036	2,916,891	1,761,502	1,142,427	1,660,874	1,138,410
Grand Total ..	116,754,029	215,007,629	178,857,096	209,484,823	339,746,128	415,194,200

8. Imports and Net Customs Revenue.—The percentage of net Customs revenue collected on the total value of all merchandise imported in each year was as follows:—1938-39, 21.9 per cent.; 1944-45, 8.0 per cent.; 1945-46, 12.7 per cent.; 1946-47, 17.1 per cent.; 1947-48, 14.9 per cent.; and 1948-49, 14.0 per cent. Primage duty was in force during these years and adding this to net Customs revenue, the percentages were as follows:—1938-39, 25.0 per cent.; 1944-45, 8.9 per cent.; 1945-46, 14.3 per cent.; 1946-47, 19.8 per cent.; 1947-48, 17.0 per cent.; and 1948-49, 15.3 per cent. The percentages of net Customs revenue, omitting primage, on the total value of dutiable goods only were—1938-39, 37.1 per cent.; 1944-45, 41.1 per cent.; 1945-46, 38.4 per cent.; 1946-47, 32.3 per cent.; 1947-48, 26.0 per cent.; and 1948-49, 24.7 per cent. The calculations are based on Australian currency values and on the assumption that the value of clearances approximated to the value of imports during the same period.

9. Protective and Revenue Customs Duties.—The value of goods cleared for Australian consumption classified under protective and revenue duties and the gross duty collected are shown in respect of the United Kingdom and other countries for each of the years 1937-38 to 1939-40 in Official Year Book No. 37, page 418. Information for a later year is not yet available

§ 12. Ships' Stores.

Prior to 1906, goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and have been omitted from the export figures. The value of these

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stores shipped each year during the period 1940-41 to 1948-49, compared with 1938-39, with fuel oils separate, is shown in the following table :—

VALUE OF STORES SHIPPED ON OVERSEA VESSELS : AUSTRALIA.
(£.)

Period.	Fuel Oils.	All Stores (including Fuel Oils).	Period.	Fuel Oils.	All Stores (including Fuel Oils).
1938-39 ..	606,515	2,105,619	1944-45 ..	8,229,307	11,373,252
1940-41 ..	1,674,133	3,528,555	1945-46 ..	2,849,156	6,331,657
1941-42 ..	3,395,337	5,791,983	1946-47 ..	1,684,502	4,500,509
1942-43 ..	3,833,414	6,016,334	1947-48 ..	2,551,736	5,500,945
1943-44 ..	6,078,800	8,478,714	1948-49 ..	3,830,986	7,814,722

In addition to fuel oils, the principal items of ships' stores supplied to oversea vessels in 1948-49 were—Bunker coal, £836,117; meats, £878,934; tobacco and cigarettes, £56,735; vegetables £115,809; ale, beer and porter, £74,281; butter, £123,088; fish, £139,783; and oils other than fuel, £163,794.

§ 13. Movement of Specie and Bullion.

1. Imports and Exports.—The following tables show the values of gold and silver specie and bullion, and of bronze specie imported into and exported from Australia during the years 1938-39 and 1944-45 to 1948-49.

IMPORTS AND EXPORTS, SPECIE AND BULLION : AUSTRALIA.
(£.)

Item.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
IMPORTS.						
Gold—Specie ..	16,686		240			105
Bullion ..	3,439,322	1,427,393	1,176,250	1,122,170	1,643,606	1,108,500
In Matte ..						
Total ..	3,456,008	1,427,393	1,176,502	1,122,170	1,643,606	1,108,605
Silver—Specie ..	57,841	1,480,157	173,482	11,286	5,753	20,070
Bullion ..	22,963	431	2,047	8,564	11,502	8,760
In Matte ..						
Total ..	80,804	1,480,588	175,529	19,850	17,255	28,830
Bronze—Specie ..	221		409,471		13	
Total ..	3,537,036	2,916,801	1,761,502	1,142,427	1,660,874	1,138,410

IMPORTS AND EXPORTS, SPECIE AND BULLION: AUSTRALIA—*continued*.
(£.)

Item.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
EXPORTS.						
Gold—Specie ..	110,204	..	..	..	30	..
Bullion ..	17,843,088	..	26,411,299	1,345	3,830,908	4,281
Total ..	17,953,292	..	26,411,299	1,345	3,830,938	4,281
Silver—Specie ..	42,726	9,485	346,799	81,132	64,488	249,052
Bullion ..	966,716	..	22,132	36,727	1,069,956	1,281,500
Total ..	1,009,442	9,485	368,931	117,859	1,134,444	1,530,552
Bronze—Specie ..	278	126	83,545	599	126	34,856
Total— Australian Pro- duce ..	15,951,167	9,611	26,533,603	79,108	4,940,854	1,396,569
Other Produce ..	3,011,845	..	330,172	40,695	24,654	173,120
Grand Total ..	18,963,012	9,611	26,863,775	119,803	4,965,508	1,569,689

2. Imports and Exports by Countries.—The next table shows the imports and exports of specie and bullion from and to various countries during the year 1948-49 :—

IMPORTS AND EXPORTS OF SPECIE AND BULLION BY COUNTRIES: AUSTRALIA,
1948-49.
(£.)

Country.	Specie.	Bullion.	Total.
IMPORTS.			
Australia(a) ..	14,788	133	14,921
United Kingdom ..	31	1,049	1,080
Australian Territories—			
New Guinea ..	..	790,201	790,201
Papua ..	..	3,511	3,511
New Zealand ..	1,001	322,154	323,155
Pacific Islands—Fiji ..	..	184	184
Total British Countries ..	15,820	1,117,232	1,133,052
France ..	..	43	43
French Dependencies—New Caledonia ..	158	..	158
United States of America ..	5,157	..	5,157
Total Foreign Countries ..	5,315	43	5,358
Grand Total ..	21,135	1,117,275	1,138,410

(a) Australian produce reimported.

IMPORTS AND EXPORTS OF SPECIE AND BULLION BY COUNTRIES :
AUSTRALIA, 1948-49—continued.
 (£.)

Country.	Specie.	Bullion.	Total.
EXPORTS.			
United Kingdom	11,116	1,276,062	1,287,178
Australian Territories—			
New Guinea	63,700	..	63,700
Norfolk Island	321	..	321
Papua	23,200	..	23,200
Ceylon	276	..	276
Cyprus	45	..	45
East Africa—Kenya	167	..	167
Hong Kong	36	75	111
New Zealand	15,010	9,557	24,567
Pacific Islands—			
Fiji	50	87	137
Gilbert and Ellice Islands	20	..	20
New Hebrides	17,400	..	17,400
Norfolk Island	1,500	..	1,500
Tonga	1,380	..	1,380
Union of South Africa	866	..	866
Total British Countries	135,087	1,285,781	1,420,868
Netherlands Dependencies—Indonesia	145,150	..	145,150
United States of America	3,671	..	3,671
Total Foreign Countries	148,821	..	148,821
Grand Total	283,908	1,285,781	1,569,689

§ 14. Exports according to Industries.

1. **Classification.**—The following table provides an analysis of the exports of Australian produce, according to the main classes of industry in which the goods were produced, for the years 1947-48 and 1948-49 in comparison with those for the years 1913 and 1938-39. The index-number based on the year 1913 shows the variations in the total recorded value only of exports in each industrial group, and has not been adjusted either for price-changes or in accordance with the variation of the Australian £ in relation to sterling.

A graph is published on page 500 of this chapter which shows the value of exports of Australian produce according to industrial groups from 1920-21 onward.

EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIAL ORIGIN : VALUE.

Industrial Group.	1913.(a)		1938-39.		1947-48.		1948-49.	
	£'000.	Index No.	£'000.	Index No.	£'000.	Index No.	£'000.	Index No.
Agriculture ..	10,678	100	26,361	247	123,142	1,153	150,379	1,408
Pastoral ..	42,057	100	59,115	141	183,336	436	272,702	648
Dairy and Farm-yard ..	3,855	100	15,640	406	34,125	885	43,134	1,127
Mines and Quarries <i>b</i> ..	21,926	100	23,081	100	29,370	134	37,882	173
Fisheries ..	425	100	288	68	725	171	1,515	356
Forestry ..	1,106	100	1,056	95	1,463	132	1,875	170
Total, Primary Produce ..	80,047	100	126,444	158	372,161	465	507,787	634
Manufacturing ..	2,305	100	8,650	375	38,465	1,669	39,900	1,731
Total ..	82,352	100	135,094	164	410,626	499	547,687	665

(a) Base year.

(b) Australian production of gold substituted for exports of gold each year.

2. **Relative Importance of Industrial Groups.**—In the previous table the value of commodities in each industrial group of exports of Australian produce is that recorded at date of shipment from Australia, with the exception that the value of the production of gold in Australia in each year has been substituted in the Mines and Quarries group for actual shipments of gold in each year. This has been done to eliminate the exports of gold for monetary purposes. In order of importance the pastoral group occupied the highest place, representing in 1913, 51.1 per cent. of the total exports, as compared with 43.7 per cent. in 1938–39, 44.6 per cent. in 1947–48, and 50.0 per cent. in 1948–49.

Exports of agricultural produce rank next in importance. From 13.0 per cent. of the total exports in 1913, agricultural produce increased to 19.5 per cent. in 1938–39. After declining to 16.2 per cent. in 1946–47, it rose again in 1947–48 to 30.0 per cent., but declined in 1948–49 to 27.6 per cent.

According to value, exports of dairy and farmyard produce increased from 4.7 per cent. in 1913 to 11.6 per cent. in 1938–39, but declined to 8.3 per cent. in 1947–48 and to 8.0 per cent. in 1948–49. Though the products of mines and quarries declined seriously subsequently to the year 1913, a recovery was made in later years, the figures for 1938–39 representing 17.7 per cent., but in 1947–48 and 1948–49 the percentages were only 7.2 and 6.9 respectively. The manufacturing groups of exports, which represented 2.8 per cent. in 1913, had increased to 6.4 per cent. in 1938–39 and to 15.7 per cent. in 1945–46. In 1947–48 it was 9.4 per cent. and in 1948–49 7.3 per cent.

3. **Australian Production and Exports according to Industry.**—The following table shows the total values of Australian production and Australian exports during the period of ten years 1938–39 to 1947–48, classified according to industries; the proportion of each industrial group to total production and to total exports; and in the last column the percentage exported of the production of each industrial group:—

VALUE OF AUSTRALIAN PRODUCTION AND EXPORTS, ACCORDING TO
INDUSTRY : 1938–39 TO 1947–48.

Industrial Group.	Value of Production during Ten Years.	Percentage on Total Production.	Value of Exports during Ten Years.	Percentage on Total Exports.	Percentage Exported of the Production in each Industrial Group.
	£'000.	%	£'000.	%	%
Agriculture	1,209,249	17.04	377,741	18.99	31.24
Pastoral	1,325,168	18.67	912,789	45.90	68.88
Dairy and Farmyard ..	755,550	10.65	184,834	9.29	24.46
Mining	381,868	5.38	213,960	10.76	56.03
Forestry and Fisheries ..	214,791	3.03	10,968	0.55	5.11
Total, Primary Produce..	3,886,626	54.77	1,700,292	85.49	43.75
Manufacturing	3,210,324	45.23	288,566	14.51	(a) 8.99
Total	7,096,950	100.00	1,988,858	100.00	28.02

(a) See letterpress in the concluding paragraph of this section.

The figures relating to value of production and value of exports are subject to the qualifications mentioned previously. A period of ten years is embraced, and the values of production and of exports therein give a very fair index of the relative importance of the several industrial groups.

The total exports of gold bullion and specie are not included in the value of exports of the mining industry, the actual production of gold during the period being taken.

On account of the inherent difficulties of classifying production and exports by industries, the figures shown for the manufacturing industry should not be interpreted too literally. In the first place, the value of manufacturing "production" stated is not the total value of output, but only the "value added" by manufacturing processes, while the value of manufactured exports represents the total value of the goods, including raw materials, etc. Secondly, some of the exported goods classified as primary produce have been increased in value by manufacturing processes, but have not been changed in form sufficiently to warrant their inclusion as manufactured products, e.g., flour, butter and sugar.

§ 15. Australian Index of Export Prices.

1. *The Old Annual Series.*—With the exception of a few years after 1929–30 an annual index of export prices has been published by this Bureau since its inception. An index was at first obtained by valuing the exports (other than gold) of each successive year at the prices of 1901, and dividing the values so obtained into the export values actually recorded. These computations were carried back to 1901. In 1918 the procedure was changed and brought into harmony with the methods adopted by the Bureau for constructing other price indexes. The average quantities of the principal exports (other than gold) for the nineteen and a half years from 1st January, 1897 to 30th June, 1916 were taken, and valued at the prices of each successive year. Comparisons of the resulting totals for different years were assumed to give the required comparisons of export price-levels for those years. The two methods would, however, give the same results only if the proportion of different exports for each year in question was the same as the average for the nineteen and a half years. The proportion was, in fact, varying appreciably from year to year with the seasons. The old index, therefore, was based on a different system of weighting in each year, so that the results were not comparable for different years. The new method gave comparable and satisfactory results so long as the proportion of different exports was not widely different from the average of 1897 to 1916. After the 1914–18 War, however, the relative importance of different exports changed considerably. By about 1930 it began to appear that the change was great enough to throw some doubt on the accuracy of the index. It was published with increasing reluctance until 1929–30, after which it was withdrawn from publication.

Following that year endeavours were made to design and compile new series of index-numbers which would reflect more accurately the short- and intermediate-period fluctuations in export prices.

2. *The New Monthly Series.*—An attempt was made to overcome some of the difficulties occasioned by variations in the proportions of the different exports by compiling two separate series of monthly index-numbers. The first series was compiled in very much the same way as the old annual index-numbers, although certain important changes have been made in the data utilized. These are described below. For the present it may be noted that the purpose of this index is to provide comparisons, over a limited number of years, of the level of prices of those commodities normally exported from Australia, making no allowance for any benefit or disadvantage accruing from variations during the period in the relative proportions of the different kinds of exports. It is thus an index purely of price changes. The second series was designed for shorter-period comparisons—from one or more months of the current year to the corresponding months of the previous year. The latter is compiled in such a way as to take closer account

of the actual quantities of each article exported at current prices : and hence to indicate with rather greater accuracy the extent to which price-movements have affected the actual value of our current exports. It will be clear, therefore, that the two series are designed to measure different things, any differences between the results being explicable on wider grounds than mere differences in formulae.

Reference has already been made to the fact that the data on which the new series are based differ from those utilized in the old series of annual index-numbers. These changes apply to both of the new series.

The most important change was the use of actual (or calculated) export parities, based on actual price quotations, in place of the "unit-values" declared at the Customs. Declared unit values are not satisfactory even in an annual index-number, partly because the returns are not always sufficiently accurate, and partly because there is a constant variation in the proportions of different grades and qualities included in the actual exports of any given period. An obvious example of the latter type of inaccuracy is furnished by the case of wool, the poorer grades of which are shipped during certain months of the off-season. In a monthly series of index-numbers, declared unit-values are even less satisfactory, as the difficulties are greatly magnified over short periods, during which the inaccuracies have little chance of averaging out.

Moreover, the export parities have in all cases been based on prices f.o.b. Australian ports. Where freight and selling charges form an appreciable percentage of the selling price, the use of unadjusted oversea quotations results in some distortion of the amplitude of the percentage fluctuations in prices.

The old index took no account of gold exports. The omission is natural and reasonable for countries which produce little or no gold. For gold-producing countries, although some exports of gold would be irrelevant (e.g., the Australian shipments of gold reserves during the depression), the exports of newly-produced gold should be taken into account. In the new series, therefore, gold is included, but the weight given to it is not the quantity exported but the quantity produced.

Each series of index-numbers takes account of 20 items, which constitute about 80 per cent. of the total value of exports of merchandise and silver, and gold production.

3. Monthly Index (Fixed Weights).—The original "quantity multipliers" used for the first series of index-numbers were, in round figures, the average annual exports (or production, in the case of gold) during the five years 1928–29 to 1932–33. This period was chosen some time ago as being fairly representative of the mutual relationship of the different export commodities over the period from 1928 to 1933 and, so far as it was possible to judge at the time, over the ensuing few years. As from July, 1936, the "multipliers" were revised to bring them into accord with observed changes in the composition of Australian exports, and are now based on the average annual exports (production in the case of gold) during the three years 1933–34 to 1935–36. The break of continuity has been bridged by the usual method of splicing.

The twenty items, together with the units of quantity and the "quantity multipliers", are given in the following table. It should be noted that (i) the "multiplier" allotted to wheat has been increased to take into account the "wheat equivalent" of flour exported; (ii) that allotted to greasy wool has been increased to take into account the "greasy equivalent" of scoured wool, tops and wool on skins; and (iii) those allotted to metals have been increased to take into account the metallic contents of ores and concentrates exported. This is the only satisfactory method of dealing with these commodities, for which it is not possible to secure satisfactory export price quotations in their own right.

EXPORT PRICE INDEX : COMMODITIES AND WEIGHTING SYSTEM.
(FROM 1ST JULY, 1936.)

Item.	Unit of Quantity.	" Quantity Multipliers ".	Percentage Distribution of Aggregative Value.			
			Base Period 1936-37 to 1938-39.		Year 1948-49.	
			Excluding Gold.	Including Gold.	Excluding Gold.	Including Gold.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Wool	lb.	975,000,000	49.05	45.63	51.34	50.02
Wheat (a)	Bushel	101,000,000	18.34	17.06	21.78	21.22
Butter	Cwt.	2,140,000	12.21	11.36	8.17	7.96
Metals—						
Silver	Oz. (standard)	7,300,000	0.68	0.64	0.48	0.47
Copper	Ton	3,600	0.20	0.20	0.17	0.17
Tin	"	1,300	0.31	0.28	0.23	0.23
Spelter	"	99,000	2.05	1.90	2.52	2.45
Lead	"	208,500	4.10	3.81	6.68	6.50
Meats—						
Beef	lb.	182,000,000	2.56	2.38	1.42	1.39
Lamb	"	138,000,000	3.56	3.31	1.58	1.54
Mutton	"	44,000,000	0.58	0.54	0.26	0.25
Pork	"	16,000,000	0.43	0.40	0.24	0.23
Sugar	Ton	305,000	2.58	2.40	2.56	2.49
Dried Fruits—						
Sultanas	"	38,200	1.45	1.35	0.66	0.64
Lexias	"	3,000	0.12	0.11	0.05	0.05
Currants	"	13,400	0.37	0.35	0.19	0.19
Tallow	Cwt.	600,000	0.69	0.64	0.81	0.79
Hides—						
Cattle	lb.	28,000,000	0.64	0.59	0.76	0.74
Calf	"	1,800,000	0.08	0.07	0.10	0.10
Gold	Oz. (fine)	937,000	..	6.98	..	2.57
			100.00	100.00	100.00	100.00

(a) Includes "wheat equivalent" of flour.

The percentage distributions of the "Aggregative Values" shown in Columns 4 to 7 of the foregoing table are of importance, firstly, as showing their variations from time to time as the result of differential price movements as between the various commodities, and secondly, as regards the effect on the indexes as a whole of the percentage price variations in each commodity. The percentage distribution of the base period of the index (1936-37 to 1938-39) only concerns this second aspect, that is, those of Columns 4 and 5, since they indicate the percentage proportions contributed by each commodity to the total percentage movement of the indexes as a whole. Thus, if the price of wool increased by 5 per cent., its contribution would be $5 \times .4905$, or 2.45 per cent. to the index as a whole (excluding gold), and $5 \times .4563$, or 2.28 per cent. to the total index (including gold)—and similarly for any other commodity or group of commodities. The percentage distributions of Columns 6 and 7, on the other hand, would only become of significance from this aspect if the year 1948-49 were chosen at any time as a new base period for the index.

The following table shows export price index-numbers for Australia for individual commodities, groups of commodities, and all groups combined for the financial years 1936-37 to 1938-39 and 1942-43 to 1948-49 and monthly for the years 1947-48 and 1948-49. For convenience of reference, the percentage distributions of the "Aggregative Values" of the base period referred to above are repeated at the head of this table.

All export parities are calculated from price quotations from the most reliable and representative sources available. In most cases the prices used are those at which current sales are being effected. For some metals, however, the prices are the average value of current realizations in various markets and hence show some irregularity.

In respect of wheat, during 1948 it became impossible to determine "prices at which current sales are being effected" because a very large proportion of exportable wheat was being sold forward on long-term contracts and at widely differing prices. In August,

1949 export sales of wheat became subject to the International Wheat Agreement, under which maximum and minimum export prices are fixed for a specified quota of wheat. Wheat in excess of the quota is sold on the open market at contract prices. A new series of wheat prices was introduced into the index in June, 1948 to meet the effect of the practice of selling on contract. This is based on average actual realizations for current shipments and, for comparability, the price index of wheat and the aggregate index were revised on this basis as from July, 1945. Prices realized for wheat shipped between November, 1948 and June, 1949 have now been adjusted in accordance with the terms of the relevant contract with the United Kingdom Government and the index accordingly revised. Immediately prior to devaluation of the £ on 19th September, 1949, the Australian equivalent of the maximum prices for International Wheat Agreement wheat was 11s. 2d. per bushel. This maximum then rose to 16s. 1d., but this change and the corresponding change in the price of other wheat has as yet had little effect on realizations for current shipments.

In respect of wool, "price at which current sales are being effected" can be determined during the selling season, but complexity of the market due to great diversity of types renders it difficult to obtain precision and recent prices are subject to possible revision, but this will not affect either trend or level of the index appreciably.

EXPORT PRICE INDEXES: AUSTRALIA.

SIMPLE AGGREGATIVE INDEX: FIXED WEIGHTS.

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(Base of each section: Average of three years ended June, 1939 = 1,000.)

Period.	Wool.	Wheat.	Butter.	Metals. (a)	Meats. (b)	Sugar.	Dried Fruits. (c)	Tallow.	Hides. (d)	Gold.	All Groups.	
											Ex- cluding Gold.	In- cluding Gold.
(e)	45.63	17.06	11.36	6.83	6.63	2.40	1.81	0.64	0.66	6.98	..	100.00
(f)	49.05	18.34	12.21	7.34	7.13	2.58	1.94	0.69	0.72	..	100.00	..
1936-37 ..	1,218	1,234	915	1,196	978	1,035	1,026	1,217	1,129	988	1,156	1,144
1937-38 ..	989	1,110	1,074	1,066	962	925	1,034	1,002	999	982	1,025	1,022
1938-39 ..	793	656	1,011	842	956	1,040	940	781	872	1,030	819	834
1942-43 ..	1,165	1,055	1,140	1,004	1,122	1,519	1,116	1,192	1,447	1,188	1,137	1,141
1943-44 ..	1,165	1,155	1,140	1,127	1,132	1,585	1,207	1,231	1,514	1,188	1,170	1,171
1944-45 ..	1,165	1,536	1,474	1,286	1,218	1,715	1,282	1,447	1,474	1,204	1,304	1,297
1945-46 ..	1,165	2,130	1,474	1,956	1,234	2,130	1,375	1,519	1,518	1,223	1,477	1,459
1946-47 ..	1,690	3,046	1,734	3,076	1,393	2,644	1,523	3,038	3,344	1,223	2,066	2,007
1947-48 ..	2,901	4,105	1,935	3,723	1,464	3,203	1,566	3,607	3,043	1,223	2,066	2,847
1948-49 ..	3,642	4,734	2,330	4,781	1,706	3,426	1,619	4,078	4,206	1,223	3,478	3,321
1947-48—												
July ..	1,923	3,676	1,734	3,515	1,446	3,004	1,560	3,038	3,222	1,223	2,340	2,263
August ..	2,376	3,790	1,734	3,493	1,446	3,004	1,569	3,038	3,366	1,223	2,583	2,488
September ..	2,451	3,861	1,734	3,523	1,446	3,004	1,569	3,038	3,366	1,223	2,636	2,536
October ..	2,564	3,815	1,734	3,584	1,446	3,004	1,569	3,707	3,678	1,223	2,693	2,591
November ..	2,560	3,720	2,011	3,588	1,446	3,004	1,561	3,707	3,688	1,223	2,701	2,701
December ..	2,866	4,013	2,035	3,589	1,446	3,004	1,569	3,797	3,678	1,223	2,915	2,797
January ..	3,243	4,274	2,035	3,685	1,446	3,402	1,569	3,797	3,678	1,223	3,166	3,032
February ..	3,394	4,461	2,035	3,621	1,446	3,402	1,569	3,797	4,043	1,223	3,274	3,130
March ..	3,168	4,558	2,035	3,789	1,446	3,402	1,557	3,797	3,873	1,223	3,101	3,054
April ..	3,092	4,597	2,035	4,021	1,446	3,402	1,557	3,797	3,834	1,223	3,178	3,157
May ..	3,281	4,710	2,035	4,055	1,554	3,102	1,557	3,797	3,652	1,223	3,301	3,157
June ..	3,583	4,748	2,035	4,246	1,554	3,402	1,572	3,797	3,652	1,223	3,468	3,313
1948-49—												
July ..	3,470	4,746	2,330	4,388	1,554	3,402	1,572	3,797	3,391	1,223	3,458	3,303
August ..	3,470	4,621	2,330	4,427	1,554	3,402	1,572	3,797	3,305	1,223	3,437	3,284
September ..	3,545	4,493	2,330	4,380	1,554	3,402	1,572	3,797	3,417	1,223	3,448	3,293
October ..	3,281	4,429	2,330	4,728	1,757	3,402	1,572	4,172	3,847	1,223	3,352	3,204
November ..	3,658	4,382	2,330	4,687	1,757	3,402	1,572	4,172	4,186	1,223	3,529	3,368
December ..	3,997	4,184	2,330	4,805	1,757	3,402	1,572	4,172	4,199	1,223	3,667	3,497
January ..	3,997	3,967	2,330	5,508	1,757	3,450	1,572	4,172	4,421	1,223	3,682	3,511
February ..	4,111	3,827	2,330	5,513	1,757	3,450	1,572	4,172	4,711	1,223	3,705	3,532
March ..	4,111	3,794	2,330	5,347	1,757	3,450	1,707	4,172	4,682	1,223	3,699	3,525
April ..	3,319	3,802	2,330	4,580	1,757	3,450	1,707	4,172	4,822	1,223	3,253	3,111
May ..	3,350	3,711	2,330	4,524	1,757	3,450	1,716	4,172	4,812	1,223	3,251	3,112
June ..	3,394	3,650	2,330	4,486	1,757	3,450	1,716	4,172	4,617	1,223	3,257	3,115

(a) Non-Ferrous—silver, copper, tin, spelter, lead. (b) Beef, lamb, mutton, pork. (c) Sultanas, tlexias, currants. (d) Cattle hides, calf skins. (e) Percentage distribution of base aggregate for "All Groups (including Gold)"—applicable from 1936-37. (f) Percentage distribution of base aggregate for "All Groups (excluding Gold)"—applicable from 1936-37.

4. **Monthly Index (Changing Weights).**—The second series of the new index-numbers is designed merely for comparisons with the corresponding month, or period of months, of the previous year. The same price quotations are used, but the "multipliers" are much more closely in accord with the actual experience of the periods in question.

For any given month, the procedure is to multiply the price of each commodity in that month, and its price in the corresponding month of the previous year, by the quantity exported during the given month. A comparison of the resulting aggregates gives one possible measure of the change in prices over the period; i.e., the change assuming that the proportions of the different kinds of exports whose prices are to be measured were the same as their proportions in the given month. Another possible measure is given by assuming that the proportions of the different kinds of exports in the given month had been the same as their proportions in the corresponding month of the previous year. Accordingly the first step in the procedure is repeated, substituting the quantities exported during the corresponding month of the previous year.

The index-numbers so obtained have been proved over a period of years to lie very close together. As it is convenient for practical reasons to have one single figure rather than two close alternatives the two index-numbers are multiplied together and the square root of the product extracted. This is taken to be the index-number for the month, the prices of the corresponding month of the previous year being taken as base.

The index-numbers for two or more months of one year, as compared with the corresponding period of the previous year, are computed in very much the same way. The process merely involves the cumulative addition of the aggregates computed for the individual months, and extraction of the index-numbers as explained above.

Index numbers computed on this basis are shown in the following table for the years 1947-48 and 1948-49:—

MONTHLY EXPORT PRICE INDEX (CHANGING WEIGHTS): AUSTRALIA.
(Base: Weighted Average Price Level in corresponding months of preceding year = 1,000.)

Month.	1947-48.		1948-49.	
	Month stated compared with same month of preceding year	Period of trade year ending in month stated compared with same period of preceding year.	Month stated compared with same month of preceding year.	Period of trade year ending in month stated compared with same period of preceding year
July	1,458	1,458	1,514	1,514
August	1,607	1,535	1,303	1,424
September	1,441	1,502	1,265	1,376
October	1,433	1,480	1,245	1,337
November	1,462	1,476	1,232	1,310
December	1,462	1,474	1,294	1,306
January	1,553	1,488	1,164	1,280
February	1,551	1,497	1,112	1,249
March	1,499	1,498	1,142	1,234
April	1,422	1,489	988	1,200
May	1,487	1,480	963	1,178
June	1,532	1,493	912	1,149

Monthly export price index-numbers are issued in regular press notices, in the *Monthly Review of Business Statistics* and in the *Quarterly Summary of Australian Statistics*.

§ 16. External Trade of Australia and other Countries.

1. **Essentials of Comparisons.**—Direct comparisons of the external trade of any two countries are possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record, it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance and charges may be added thereto. Again, the values of imports and exports in the one may be declared by merchants, whereas in the other they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial

difference in the value of imports would rise from the different methods of converting the moneys of foreign countries, i.e., from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. This class of trade represents a much greater proportion of the trade of Switzerland and Belgium than that of other countries. France and the United Kingdom also re-export largely, whereas in Canada, Australia and New Zealand the same class of trade represents a comparatively small proportion of the total trade.

2. "Special Trade" of Various Countries.—Special trade may be defined according to the interpretation of the British Board of Trade, as (a) imports entered for consumption in the country (as distinguished from imports for transhipment or re-export), and (b) exports of domestic products.

In the following table the figures, which represent Australian currency values, relate as nearly as possible to imports entered for consumption in the various countries specified, and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption, and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Nevertheless, a comparison of this character reveals approximately the extent of the external trade which otherwise would not be manifest. The latest figures relating to foreign countries have been extracted from the publications of the United Nations and converted to Australian currency.

IMPORTS FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS (MERCHANDISE ONLY) : VARIOUS COUNTRIES, 1948.

Country.	Trade (£'000,000).			Trade per Head of Population (£ s. d.)		
	Imports.	Exports.	Total.	Imports.	Exports	Total.
Australia (a) ..	414.0	539.9	953.9	53 1 9	69 4 5	122 6 2
United Kingdom ..	2,616.0	2,154.1	4,770.1	52 5 9	43 1 1	95 6 10
Canada ..	820.5	965.9	1,786.4	63 13 9	74 19 7	138 13 4
India ..	488.0	397.7	885.7	1 8 6	1 3 3	2 11 9
New Zealand ..	139.4	160.2	299.6	75 14 8	87 0 2	162 14 10
Belgium ..	613.8	520.6	1,134.4	71 14 8	60 16 10	132 11 6
Brazil ..	350.3	362.1	712.4	7 4 8	7 9 6	14 14 2
Czechoslovakia ..	234.9	234.5	469.4	19 0 9	19 0 0	38 0 9
Denmark ..	222.3	177.8	400.1	53 1 0	42 8 10	95 9 10
France ..	988.8	651.5	1,640.3	24 4 9	15 19 4	40 4 1
Netherlands ..	588.3	318.4	906.7	59 11 3	32 10 4	92 1 7
Norway ..	233.8	129.7	363.5	73 9 11	40 15 6	114 5 5
Portugal ..	128.8	54.9	183.7	15 6 6	6 10 8	21 17 2
Sweden ..	429.0	345.7	774.7	62 6 7	50 4 7	112 11 2
Switzerland ..	362.2	248.4	610.6	78 11 7	53 17 10	132 9 5
U.S.A. ..	2,226.5	3,987.0	6,213.5	15 3 10	27 4 1	42 7 11

(a) Year ended 30th June, 1949.

§ 17. Trade of the United Kingdom with Australia compared with that of Competing Countries.

Proportion of Trade from United Kingdom and Competing Countries.—Since 1903 permanent resident Commissioners appointed by the British Board of Trade have been located in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From 8th August, 1907, the Commonwealth Customs Tariffs have provided preferential rates of Customs Duties on certain goods the produce or manufacture of the United Kingdom with the object of assisting the British manufacturer to retain or improve his position in this market in relation to other countries. The main provisions in these Acts relating to preference are dealt with on previous pages in this Chapter.

In an investigation into the relative position occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufactured in the United Kingdom. The imports into Australia include many commodities, such as tea, rice, raw coffee, unmanufactured tobacco, petroleum products, copra, timber, etc., which the United Kingdom could not supply. These items, in addition to others not available from that country, have, therefore, been omitted from the computation following.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, Germany, Japan, and the United States of America. These countries have been selected as the principal competitors in normal times with the United Kingdom for the trade of Australia under the specified headings. Totals for the years 1913, 1938-39, 1947-48 and 1948-49 are shown in the following table.

AUSTRALIAN IMPORTS OF PRODUCTS OF VARIOUS COUNTRIES : VALUE.

(£.)

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	United States of America.	All Countries.
Foodstuffs of animal origin	1913 ..	273,987	2,815	10,987	6,360	263,250	862,574
	1938-39	343,323	1,132	624	200,217	307,528	1,823,802
	1947-48	693,009	3,568	..	..	260,504	3,690,165
	1948-49	762,307	9,718	6,493	55	308,862	3,901,370
Spirituans and alcoholic liquors	1913 ..	1,117,301	312,550	130,543	1,537	2,553	1,772,345
	1938-39	609,816	66,852	4,925	179	1,345	820,762
	1947-48	573,252	155,020	31	1	617	762,354
	1948-49	677,266	221,023	11	..	1,130	984,863
Apparel, textiles, and manufactured fibres	1913 ..	11,153,551	874,705	1,587,587	433,221	507,535	18,145,113
	1938-39	11,438,102	468,604	574,233	2,901,392	321,213	20,241,952
	1947-48	14,122,511	1,777,618	12,758	10,421,173	10,421,173	26,668,101
	1948-49	70,778,109	2,049,625	390,732	623,905	2,565,308	109,197,688
Metals, metal manufactures, and machinery	1913 ..	12,656,487	197,644	2,166,366	6,969	3,474,797	19,723,785
	1938-39	30,811,191	60,881	1,682,322	101,000	3,880,415	33,652,810
	1947-48	52,680,953	133,642	597,073	2,130	22,123,510	85,378,948
	1948-49	92,402,903	389,407	750,439	135,359	21,588,337	128,035,543
Paper and stationery	1913 ..	1,628,836	19,960	242,547	9,699	367,420	2,853,186
	1938-39	3,358,030	58,792	361,085	100,831	424,732	7,051,557
	1947-48	8,087,860	304,875	273	68	3,027,392	23,383,243
	1948-49	8,185,359	103,791	12,916	1,567	696,567	21,066,945
Jewellery, time-pieces, and fancy goods	1913 ..	474,468	80,160	240,003	17,573	125,802	1,312,745
	1938-39	775,843	35,715	1,000,000	1,000,000	1,000,000	3,365,810
	1947-48	2,478,602	86,623	110	150	50,791	4,130,770
	1948-49	2,836,687	322,471	112,322	340	35,506	4,914,539
Earthenware, cements, glass, etc.	1913 ..	591,742	36,630	412,483	19,563	57,239	1,425,093
	1938-39	1,078,691	19,357	233,161	208,600	102,337	2,122,650
	1947-48	4,938,886	40,381	776	281	445,836	7,250,489
	1948-49	5,992,800	49,837	21,499	84,393	185,574	7,841,593
Drugs, chemicals, and fertilizers	1913 ..	928,972	223,382	276,858	126,677	191,828	2,477,420
	1938-39	2,608,761	223,691	543,480	54,322	1,144,194	6,382,351
	1947-48	5,086,256	252,793	7,226	996	2,174,198	11,035,975
	1948-49	5,884,841	430,381	238,029	109,983	1,264,216	11,877,991
Rubber and leather and manufactures thereof, and substitutes therefor	1913 ..	441,634	62,517	315,873	626	394,870	1,562,810
	1938-39	282,345	5,676	54,006	43,565	130,228	1,926,142
	1947-48	1,634,477	10,347	4	1	577,545	5,352,188
	1948-49	3,008,182	12,522	123	1,701	308,140	6,695,123
Total, above-mentioned imports	1913 ..	29,267,278	1,810,363	5,354,247	622,225	5,445,294	50,135,071
	1938-39	40,923,102	940,700	3,620,904	3,899,983	10,421,150	77,654,086
	1947-48	120,361,109	2,764,867	618,258	973,817	48,081,566	237,055,233
	1948-49	190,528,954	3,588,775	1,533,464	957,303	26,953,740	294,569,582
Total Imports (Value in million and specie)	1913 ..	37,270,765	2,022,093	6,397,948	864,944	9,927,795	72,905,553
	1938-39	60,775,881	1,177,372	4,200,381	1,000,000	10,421,150	110,582,986
	1947-48	132,236,757	3,118,375	639,154	1,433,127	68,823,479	331,485,239
	1948-49	209,311,774	3,997,862	1,849,345	1,710,558	41,522,325	406,042,732

Stated as percentages the figures in the preceding table are shown below.

AUSTRALIAN IMPORTS OF PRODUCTS OF VARIOUS COUNTRIES : PERCENTAGES.

(Per Cent.)

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	United States of America.	All Countries.
Foodstuffs of animal origin	{ 1913 ..	31.77	0.33	1.27	0.74	30.52	100
	{ 1938-39	18.77	0.06	0.03	10.98	16.86	100
	{ 1947-48	18.88	0.09	..	..	7.05	100
	{ 1948-49	19.24	0.23	0.16	0.00	7.79	100
Spirituous and alcoholic liquors	{ 1913 ..	63.04	17.64	7.37	0.09	0.14	100
	{ 1938-39	85.26	8.15	0.60	0.02	0.16	100
	{ 1947-48	75.19	20.33	0.00	0.00	0.08	100
	{ 1948-49	68.88	22.44	0.00	..	0.11	100
Apparel, textiles, and manufactured fibres	{ 1913 ..	61.48	4.82	8.39	2.39	3.13	100
	{ 1938-39	56.51	2.32	2.84	14.33	1.59	100
	{ 1947-48	45.92	1.85	0.01	1.01	20.02	100
	{ 1948-49	64.82	1.87	0.36	0.57	1.97	100
Metals, metal manufactures, and machinery	{ 1913 ..	64.17	1.00	10.98	0.04	17.62	100
	{ 1938-39	58.34	0.17	4.63	0.54	22.02	100
	{ 1947-48	61.70	0.15	0.69	0.00	25.91	100
	{ 1948-49	72.16	0.30	0.59	0.11	16.86	100
Paper and stationery	{ 1913 ..	57.09	0.70	8.50	0.34	12.88	100
	{ 1938-39	47.62	0.83	5.12	1.43	6.02	100
	{ 1947-48	34.58	1.30	0.00	0.00	12.95	100
	{ 1948-49	38.86	0.49	0.06	0.00	3.31	100
Jewellery, time-pieces, and fancy goods	{ 1913 ..	36.14	6.11	18.28	1.34	9.58	100
	{ 1938-39	19.23	2.19	12.07	12.25	8.52	100
	{ 1947-48	60.03	2.09	0.00	0.00	1.23	100
	{ 1948-49	57.72	6.56	2.28	0.01	0.72	100
Earthenware, cements, glass, etc.	{ 1913 ..	41.52	2.57	28.94	1.37	4.02	100
	{ 1938-39	50.82	0.91	10.98	9.83	4.83	100
	{ 1947-48	68.12	0.56	0.00	0.00	6.15	100
	{ 1948-49	76.42	0.63	0.27	1.08	2.37	100
Drugs, chemicals, and fertilizers	{ 1913 ..	37.49	9.02	11.18	5.11	7.74	100
	{ 1938-39	40.87	3.50	8.52	0.85	17.93	100
	{ 1947-48	46.08	2.29	0.07	0.00	19.70	100
	{ 1948-49	49.54	3.62	2.01	0.92	10.64	100
Rubber and leather and manufactures thereof, and substitutes therefor	{ 1913 ..	28.26	4.00	20.21	0.04	25.27	100
	{ 1938-39	14.66	0.29	2.80	2.26	6.76	100
	{ 1947-48	30.54	0.19	0.00	0.00	10.79	100
	{ 1948-49	44.94	0.19	0.00	0.02	4.60	100
Total, above-mentioned articles	{ 1913 ..	58.38	3.61	10.68	1.24	10.86	100
	{ 1938-39	52.69	1.21	4.66	5.02	13.42	100
	{ 1947-48	50.75	1.17	0.26	0.41	20.28	100
	{ 1948-49	64.68	1.22	0.52	0.32	9.15	100
Total imports (less bullion and specie)	{ 1913 ..	52.37	2.84	8.99	1.22	13.95	100
	{ 1938-39	41.07	1.06	4.26	4.22	15.10	100
	{ 1947-48	39.80	0.94	0.19	0.43	20.76	100
	{ 1948-49	51.55	0.98	0.46	0.42	10.23	100

The total value of the commodities included in the competitive classes increased from £50,135,071 during 1913 to £77,654,086 in 1938-39 and to £237,055,233 in 1947-48. In 1948-49 it had increased to £294,569,582. The principal classes of competitive imports are (a) metals, metal manufactures and machinery (value £128,035,543 in 1948-49) and (b) apparel, textiles and manufactured fibres (value £109,197,688 in 1948-49). The value of goods included in these two groups represented 80.5 per cent. of the total value of competitive commodities during 1948-49.

In 1938-39 the United Kingdom supplied 52.69 per cent. of the total value of competitive goods. In 1913 the corresponding figure was 58.38 per cent. and in 1948-49 64.68 per cent.

The share of Japan in the competitive trade increased in proportion to other countries from 1.24 per cent. in 1913 to 5.02 per cent. in 1938-39. Owing to the effects of war it was reduced to 0.06 per cent. in 1946-47 and in 1948-49 it was 0.32 per cent.

The position of the United States of America in the competitive trade improved from 10.86 per cent. in 1913 to 13.42 per cent. in 1938-39 and to 20.28 per cent. in 1947-48, falling to 9.15 per cent. in 1948-49.

The position of France declined from 3.61 per cent. in 1913 to 1.21 per cent. in 1938-39 and to 1.22 in 1948-49.

The proportion of the competitive imports supplied by Germany was 10.68 per cent. in 1913, and 4.66 per cent. in 1938-39. In consequence of the war, the proportion of imports from Germany during 1948-49 was 0.52 per cent.

§ 18. Oversea Trade in Calendar Years.

For the purpose of comparison with countries which record overseas trade in calendar years the following table has been compiled to show Australian imports and exports for each quarter of the calendar years 1939 and 1947 to 1949 :—

OVERSEA TRADE IN CALENDAR YEARS : AUSTRALIA.

(£'000.)

Year.	Merchandise.		Bullion and Specie.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
QUARTER ENDED MARCH.						
1939	28,611	30,905	925	4,361	29,536	35,266
1947	51,900	73,702	295	22	52,195	73,724
1948	86,409	119,520	392	219	86,801	119,730
1949	106,656	140,794	126	285	106,782	141,079
QUARTER ENDED JUNE.						
1939	26,815	26,300	703	4,798	27,518	31,107
1947	64,300	79,868	307	6	64,607	79,874
1948	95,011	125,511	457	258	95,468	125,769
1949	108,231	138,618	325	343	108,556	138,961
QUARTER ENDED SEPTEMBER.						
1939	28,367	24,596	870	4,778	29,237	29,374
1947	79,091	66,358	430	370	79,521	66,728
1948	102,536	121,645	146	513	102,682	122,158
1949	113,005	109,095	461	183	113,466	109,278
QUARTER ENDED DECEMBER.						
1939	25,541	41,918	1,228	6,185	26,769	48,103
1947	77,574	93,600	382	4,118	77,956	97,718
1948	96,633	143,666	541	417	97,174	144,083
1949	127,219	149,259	484	388	127,703	149,647

OVERSEA TRADE IN CALENDAR YEARS: AUSTRALIA—*continued.*

(£'000.)

Year.	Merchandise.		Bullion and Specie.		Total.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
TOTAL FOR YEAR.						
1939	109,334	123,728	3,726	20,122	113,060	143,850
1947	272,865	313,528	1,414	4,516	274,279	318,044
1948	380,589	510,342	1,536	1,407	382,125	511,749
1949	455,111	537,766	1,396	1,899	456,507	538,965

§ 19. Excise.

Although excise goods have no immediate bearing on overseas trade the rates of excise duty are in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Department of Trade and Customs it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of Customs and Excise Revenue are shown in Chapter XVII. "Public Finance". The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1944-45 to 1948-49 as compared with the year 1938-39.

QUANTITIES OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA.

Article.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Spirits—						
Brandy	198,583	326,993	383,285	329,068	392,046	446,268
Gin	269,118	491,046	769,452	601,691	508,669	603,817
Whisky	157,705	371,688	385,502	371,574	426,426	466,984
Rum	347,648	304,686	606,386	580,203	675,279	690,816
Liqueurs	5,705	41,278	85,537	68,790	45,472	32,359
Spirits, n.e.i.	170	424	26,184	4,601	765	4,548
Spirits for Industrial or Scientific purposes ..	114,129	207,366	202,997	203,224	184,152	168,533
Spirits for Fortifying Wine ..	770,997	1,759,546	1,224,989	1,511,407	2,289,580	2,493,758
" „ making Vinegar ..	17,965	70,305	71,649	62,930	58,675	63,345
	gal.	gal.	gal.	gal.	gal.	gal.
Amylic Alcohol and Fusel Oil ..	23	36	16	62	3	1
Methylated Spirit .. ..	..	3,511,612	2,664,573	853,660	..	..
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Spirits for the manufacture of						
Essences	57,376	89,398	91,372	92,393	100,520	88,881
Spirits for the Manufacture of						
Scents, etc.	47,778	115,190	110,805	101,979	86,711	84,124
	gal.	gal.	gal.	gal.	gal.	gal.
Beer	83,904,645	94,578,430	99,669,860	119,473,069	118,090,552	138,838,184

QUANTITIES OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY
WAS PAID: AUSTRALIA—*continued.*

Article.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
	lb.	lb.	lb.	lb.	lb.	lb.
Tobacco—Manufactured, n.e.i.	15,734,675	15,219,618	16,603,789	19,066,568	19,138,523	18,552,433
Hand-made	41,774	..	..	..	..	..
Unmanufactured, etc.	5,604,256	..	..	..	..	..
Total, Tobacco	21,380,705	15,219,618	16,603,789	19,066,568	19,138,523	18,552,433
	lb.	lb.	lb.	lb.	lb.	lb.
Cigars.—Machine-made	71,051	38,212	37,007	32,028	36,425	55,012
Hand-made	187,450	77,418	91,217	110,577	125,837	111,467
Total, Cigars	258,501	115,630	128,224	142,605	162,262	166,479
	lb.	lb.	lb.	lb.	lb.	lb.
Cigarettes—Machine-made	6,891,144	7,413,219	7,914,168	9,042,625	9,782,288	9,550,936
Hand-made	114	..	..	..	..	..
Total, Cigarettes	6,891,258	7,413,219	7,914,168	9,042,625	9,782,288	9,550,936
	lb.	lb.	lb.	lb.	lb.	lb.
Snuff	..	662	583	660	..	..
	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.	60 papers or tubes.
Cigarette Tubes and Papers	101,977,824	109,594,422	94,130,600	129,244,343	145,380,471	123,091,390
	gross of boxes.	gross of boxes.	gross of boxes.	gross of boxes.	gross of boxes.	gross of boxes.
Matches	3,278,759	2,989,582	2,876,602	3,414,990	3,264,439	3,315,463
	gal.	gal.	gal.	gal.	gal.	gal.
Petrol	27,878,912	9,324,996	10,290,139	12,837,869	16,301,529	64,095,876
	doz. packs.	doz. packs.	doz. packs.	doz. packs.	doz. packs.	doz. packs.
Playing Cards	117,412	87,836	74,579	91,603	116,339	134,826
	lb.	lb.	lb.	lb.	lb.	lb.
Carbonic Acid Gas	..	6,421,510	6,794,722	2,472,991	..	..
Dry Batteries and Cells	..	3,635,369	4,578,057	2,488,400	..	..
Saccharin	..	4,779	5,570	12,199	7,354	266

§ 20. Interstate Trade.

Prior to the federation of the Australian Colonies (now States), each Colony published statistics of its trade with the other Colonies. A similar record was continued by the Commonwealth Government under the provisions of the Constitution (Section 93). On the expiry of the "book-keeping" period, these records were discontinued as from 13th September, 1910, and the latest published statements were for the year 1909. Later, the Governments of Western Australia and Tasmania revived the records, and statistics of the subject are available again for those States.

At the Conference of Statisticians held in January, 1928 it was resolved that efforts should be made in other States to record the interstate movement of certain principal commodities.

The Government Statist for South Australia publishes some figures for that State made up from the records of Western Australia and Tasmania, and from various other sources. Since February, 1940, statistics in some detail have been collected by the Government Statistician of Queensland. The statistics of interstate trade for New South Wales and Victoria are very meagre. The Melbourne Harbour Trust publishes, in its annual report, the quantities of various commodities of interstate trade loaded and discharged in the Port of Melbourne. The trade with individual States is not disclosed.

CHAPTER XIII.

POPULATION.

NOTE.—The figures shown throughout this Chapter for the Census of 30th June, 1947 are the final results, and population estimates shown for the intercensal period 1933–47 are revised figures which have been adjusted in accordance with these results.

§ 1. Population Statistics.

Australian population statistics comprise two types—firstly, those derived from Census counts, and, secondly, those derived between Census dates by the application of vital and migration statistics to the numbers recorded at the last Census. These intercensal estimates are subsequently revised in the light of the next Census results.

The results obtained at the Census attain a very high degree of accuracy and may generally be accepted without reservation.

Since the establishment of the Commonwealth Bureau of Census and Statistics attention has been given to the improvement of intercensal estimates. The principal source of error lay in the migration records and efforts were directed towards their improvement. The 1911 Census disclosed an error in the precensal estimates of an amount equal to a percentage on the recorded overseas departures from Australia of 14.5 per cent. for males and 10 per cent. for females. These percentages were used as adjusting factors for recorded overseas departures during the intercensal period 1911–21. These adjusting factors were reduced after the 1921 Census to 1 per cent. for males and 4.5 per cent. for females and were finally discontinued after the 1933 Census. From the results of the 1947 Census it would again appear that the accuracy of the records of overseas migration is such that in future little adjustment to the recorded figures for Australia as a whole will be necessary. It should be noted, however, that as from July, 1922, the figures for overseas migration relate to passenger traffic and do not include crews of overseas vessels.

It is improbable that the same degree of accuracy as has been attained in the record of overseas migration can be reached in the case of interstate movements. Records are made of interstate passengers by sea, by rail, and by air, but it is impracticable to record the movements by road.

§ 2. The Census.

1. *Census-taking.*—Although “musters” of the population were carried out at least annually from 1788 to 1825, the first regular Census in Australia was not taken until 1828 when a count of the population of the Colony of New South Wales was made. Subsequent Censuses were taken sporadically in the various colonies until 1881 when a Census was taken on the same date throughout Australia.

In 1891 and 1901 Census-taking was still in the hands of the Government Statisticians of the States, but, in 1911, under the provisions of the Commonwealth Census and Statistics Act, which provides for the enumeration to be made from one centre instead of by each State as formerly, the Commonwealth Statistician undertook the first Census for the Commonwealth of Australia. The second was taken in 1921.

In accordance with the provisions of the Commonwealth Census and Statistics Act 1905-1920, the third Commonwealth Census would have been taken in 1931, but, owing to the necessity for economy in governmental expenditure, it was decided to defer the Census, and the date was subsequently fixed for 30th June, 1933.

Owing to the 1939-45 War the fourth Census, due to be taken in 1941, was deferred until June, 1947, the Census for the whole of Australia being taken as for the night between 29th and 30th June, 1947.

2. Results of the Censuses.—The results of the Censuses taken over the period 1828 to 1947 are shown in the following table:—

POPULATION : AUSTRALIAN CENSUSES, 1828 TO 1947.

Population Enumerated (Excluding Full-blood Aborigines).

Census Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Nor. Terr.	Aust. Cap. Terr.	Australia Total.
1828..	(Nov.) 36,598	..	..	..	..	..	..	..	..
1833..	(2nd Sept.) 60,794	..	..	..	..	..	..	..	..
1836..	(2nd Sept.) 77,096	..	..	..	..	..	..	..	..
1841..	(2nd Mar.) (a) 128,669	..	..	..	..	(27th Sept.) 50,216	..	..	..
1844..	(2nd Mar.) 17,366	..	..	(26th Feb.) 17,366	..	..	..	..	..
1846..	189,609	..	..	(26th Feb.) 22,390	..	..	..	..	..
1847..	..	..	..	..	..	(31st Dec.) 70,164	..	..	..
1848..	..	..	..	..	(10th Oct.) 4,622	..	..	..	..
1851..	(1st Mar.) 268,344	..	..	(1st Jan.) 63,700	..	(1st Mar.) 70,130	..	..	..
1854..	..	(26th April) (b) 234,928	..	..	(30th Sept.) 11,743	..	..	..	..
1855..	..	..	..	(31st Mar.) 85,821	..	..	..	..	..
1856..	(1st Mar.) 269,722	..	..	..	..	..	..	..	..
1857..	..	(29th Mar.) 408,998	..	..	..	(31st Mar.) 81,492	..	..	..
1859..	..	..	..	..	(31st Dec.) 14,837	..	..	..	..
1861..	(7th April) 350,860	(7th April) 538,628	(7th April) (b) 39,059	(7th April) 126,830	..	(7th April) 89,977	..	..	..
1864..	..	..	(1st Jan.) 61,467	..	..	..	..	..	..
1866..	..	..	(26th Mar.) 163,452	..	..	..	..	..	..
1868..	..	..	(2nd Mar.) 99,901	..	..	..	..	..	..
1870..	..	..	..	..	(31st Mar.) 24,785	(7th Feb.) 99,328	..	..	..
1871..	(2nd April) 502,998	(2nd April) 730,198	(1st Sept.) 120,104	(2nd April) 185,626	..	..	..	..	..
1876..	..	..	(1st May) 173,283	(26th Mar.) 213,271	..	..	..	..	..
1881(c)	749,825	861,566	213,525	276,414	29,708	115,705	(d) 3,451	..	2,250,194
1886..	..	..	(1st May) 322,853	..	..	..	..	..	..
1891(e)	a 1,127,137	(a) 1,140,088	393,718	315,533	49,782	146,667	4,808	..	a 3,177,823
1901(f)	1,354,846	1,201,070	498,129	358,346	184,124	172,175	4,811	..	3,773,801
1911(c)	1,646,734	1,315,551	605,813	408,558	282,114	191,211	3,310	(b) 1,714	4,455,005
1921(g)	2,100,371	1,531,280	755,072	495,166	332,732	213,780	3,867	2,572	5,435,734
1933(h)	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947	6,629,839
1947(h)	..	..	..	..	..	..	..	..	..
(i) ..	2,984,838	2,054,701	1,106,415	646,073	502,480	257,078	10,868	16,905	7,579,358

(a) Revised figure. (b) Previously included with New South Wales. (c) 3rd April.
 (d) Previously included with South Australia. Actually Northern Territory was not transferred to the Commonwealth until 1st January, 1911. (e) 5th April. (f) 31st March. (g) 4th April.
 (h) 30th June. (i) Final count.

The population of each State and Territory as at the Censuses of 1933 and 1947 is shown in the following table :—

POPULATION OF STATES : 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	30th June, 1933.			30th June, 1947. (Final Count.)		
	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales ..	1,318,471	1,282,376	2,600,847	1,492,211	1,492,627	2,984,838
Victoria ..	903,244	917,017	1,820,261	1,013,867	1,040,834	2,054,701
Queensland ..	497,217	450,317	947,534	567,471	538,944	1,106,415
South Australia ..	200,962	289,987	580,949	320,031	326,042	646,073
Western Australia ..	233,937	204,915	438,852	258,076	244,404	502,480
Tasmania ..	115,097	112,502	227,599	129,244	127,834	257,078
Northern Territory ..	3,378	1,472	4,850	7,378	3,490	10,868
Australian Capital Territory ..	4,805	4,142	8,947	9,092	7,813	16,905
Australia ..	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358

3. Increase since 1881 Census.—(i) *Australia.* The increase of population during the fourteen years between the 1933 Census and the 1947 Census (final count) was 949,519 of which 430,259 were males and 519,260 were females, as compared with an increase of 1,194,105, comprising 604,241 males and 589,864 females, for the preceding intercensal period of 12½ years. The population enumerated at each Census from 1881 to 1947 was as follows :—

POPULATION OF AUSTRALIA AT EACH CENSUS, 1881 TO 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Date.	Males.	Females.	Persons.	Masculinity, (a)
3rd April, 1881	1,214,913	1,035,281	2,250,194	117.35
5th April, 1891	1,705,835 ^(b)	1,471,988 ^(b)	3,177,823 ^(b)	115.89
31st March, 1901	1,977,028	1,795,873	3,773,801	110.14
3rd April, 1911	2,313,035	2,141,970	4,455,005	107.99
4th April, 1921	2,762,870	2,672,864	5,435,734	103.37
30th June, 1933	3,367,111	3,262,728	6,629,839	103.20
30th June, 1947 ^(c)	3,797,370	3,781,988	7,579,358	100.41

(a) Number of males per 100 females.

(b) Revised figure.

(c) Final count.

(ii) *States and Territories.* The postponement till 1933 and 1947 of the Censuses which ordinarily would have been taken in 1931 and 1941 respectively destroyed the continuity of the decennial intercensal period which had obtained in Australia since 1881. Consequently, with the exception of the figures expressed as percentage increases per annum, which have been included to give a true comparison of the rate of growth during each intercensal period for Australia as a whole, the increases shown in the following table for the periods 1921–33 (12½ years) and 1933–47 (14 years) are not directly comparable with each other nor with the results shown for the earlier periods.

The increases in the population of the several States and Territories during the last six intercensal periods have been as follows :—

POPULATION : INTERCENSAL INCREASES.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	1881-1891.	1891-1901.	1901-1911.	1911-1921.	1921-1933. (12½ years)	1933-1947. (14 years) (d)
New South Wales..	{ Number <i>ab</i> 377,312 Per cent. <i>ab</i> 50.32	{ Number <i>ab</i> 227,709 Per cent. <i>ab</i> 20.20	{ Number <i>(a)</i> 293,602 Per cent. <i>(a)</i> 21.67	453,637 27.55	500,476 23.83	383,991 14.76
Victoria ..	{ Number <i>(b)</i> 278,522 Per cent. <i>(b)</i> 32.33	{ Number <i>(b)</i> 60,982 Per cent. <i>(b)</i> 5.35	{ Number 114,481 Per cent. 9.53	215,729 16.40	288,981 18.87	234,440 12.88
Queensland ..	{ Number 180,193 Per cent. 84.39	{ Number 104,411 Per cent. 26.52	{ Number 107,684 Per cent. 21.62	150,159 24.79	191,562 25.34	158,881 16.77
South Australia ..	{ Number 39,119 Per cent. 14.15	{ Number 42,813 Per cent. 13.57	{ Number 50,212 Per cent. 14.01	86,602 21.20	85,789 17.33	65,124 11.21
Western Australia..	{ Number 20,074 Per cent. 67.57	{ Number 134,342 Per cent. 269.86	{ Number 97,990 Per cent. 53.22	50,618 17.04	106,120 31.89	63,628 14.50
Tasmania ..	{ Number 30,962 Per cent. 26.76	{ Number 25,808 Per cent. 17.60	{ Number 18,736 Per cent. 10.86	22,559 11.80	15,819 6.46	29,479 12.95
Northern Territory	{ Number 1,447 Per cent. 41.93	{ Number — 87 Per cent. — 1.78	{ Number — 1,501 Per cent. — 31.20	557 16.83	983 25.42	6,018 124.08
Australian Capital Territory	{ Number <i>(c)</i> Per cent. <i>(c)</i>	{ Number <i>(c)</i> Per cent. <i>(c)</i>	{ Number <i>(c)</i> Per cent. <i>(c)</i>	858 50.06	6,375 247.86	7,958 88.95
Australia ..	{ Number <i>(b)</i> 927,629 Per cent. <i>(b)</i> 41.22 Per cent. per annum <i>(b)</i> 3.51	{ Number <i>(b)</i> 593,978 Per cent. <i>(b)</i> 18.75 Per cent. per annum <i>(b)</i> 1.73	{ Number 681,204 Per cent. 18.05 Per cent. per annum 1.67	980,729 22.01 2.01	1,194,105 21.97 1.63	949,519 14.32 0.96

(a) Includes Australian Capital Territory.
Wales prior to 1911.

(b) Revised figure.

(c) Part of New South

(d) Based on final count for 1947 Census.

NOTE.—Minus sign (—) denotes decrease.

The numerical increase during the period 1933-47 (14 years) was less by 244,586 than that for the period 1921-33 (12½ years) and the percentage increase declined from 21.97 for 1921-33 to 14.32 for 1933-47. During the earlier period the increase corresponds to 1.63 per cent. per annum, and in the latter to 0.96 per cent. per annum.

§ 3. Distribution and Fluctuation of Population.

1. **Present Numbers.**—The population of Australia on 31st December, 1948, was estimated at 7,794,880 persons of whom 3,910,051, or 50.16 per cent., were males and 3,884,829, or 49.84 per cent., were females. The increase during 1948 was 156,252, equal to 2.05 per cent., males having increased by 81,180, or 2.12 per cent., and females by 75,072, or 1.97 per cent. This increase was due mainly to the excess of births over deaths, namely 101,137, but a net gain by migration of 55,115 persons. was also recorded.

2. **Growth and Distribution.**—The table which follows shows the growth in the population of the various States and Territories at various intervals from 1788 to 1948. Details as to sex for the years 1788 and 1790 are not available.

ESTIMATED POPULATION: 1788 TO 1948.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

As at 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia
MALES.									
1800a	3,780	..	..	..	..	..	..	..	3,780
1810	6,611	..	..	..	..	974	..	..	7,585
1820	19,626	..	..	..	..	4,158	..	..	23,784
1830	33,900	..	..	..	877	18,108	..	..	52,885
1840	85,560	..	..	8,272	1,434	32,040	..	..	127,306
1850	154,976	..	..	35,902	3,576	44,229	..	..	238,683
1860	197,851	(b)330,302	(b)16,817	64,340	9,597	49,653	..	..	668,560
1870	272,121	397,230	69,221	94,894	15,511	53,517	..	..	902,494
1880	404,952	450,558	124,013	147,438	16,985	60,568	..	..	1,204,514
1890	602,704	595,519	223,252	166,049	28,854	76,453	..	..	1,692,831
1900	710,047	601,773	274,084	180,349	110,088	89,763	(c)4,288	..	1,976,092
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	..	2,296,308
1920	1,067,945	753,803	396,555	245,300	176,895	107,259	2,911	(b)1,062	2,751,730
1930	1,294,419	892,422	481,559	288,618	232,868	113,505	3,599	4,732	3,311,722
1933d	1,324,913	904,868	497,460	291,727	234,744	116,922	3,373	5,042	3,379,049
1934d	1,335,351	909,806	502,483	292,531	236,140	117,043	3,446	5,065	3,381,865
1935d	1,344,096	910,740	508,348	293,667	238,739	118,124	3,490	5,234	3,423,038
1936d	1,356,004	913,959	514,750	294,835	240,827	119,038	3,607	5,606	3,448,024
1937d	1,369,186	916,974	519,679	295,653	244,050	121,136	3,656	5,952	3,476,286
1938d	1,381,054	924,034	525,264	297,604	246,943	122,427	3,841	6,376	3,507,543
1939de	1,393,358	929,470	532,038	299,212	249,065	123,104	5,136	7,187	3,538,060
1940de	1,402,297	947,037	536,712	297,885	248,734	123,650	6,337	7,856	3,570,508
1941de	1,410,509	964,619	537,879	301,645	246,842	122,153	7,204	7,733	3,598,044
1942de	1,427,739	970,729	534,767	303,511	246,816	122,440	6,056	7,641	3,619,699
1943de	1,436,177	979,549	542,738	305,655	246,389	123,067	7,216	7,368	3,648,159
1944de	1,449,551	986,889	548,848	308,853	249,301	124,293	7,235	7,825	3,682,795
1945de	1,464,686	994,784	556,829	312,588	251,590	125,854	7,252	8,283	3,721,866
1946de	1,480,644	1,006,395	563,013	317,238	255,310	128,007	7,263	8,819	3,766,689
1947	1,504,350	1,016,950	569,480	324,055	261,689	135,674	7,403	9,270	3,828,871
1948	1,531,000	1,040,640	580,030	331,058	268,384	140,286	8,065	9,598	3,910,051
FEMALES.									
1800a	1,437	..	..	..	..	..	..	..	1,437
1810	3,485	..	..	..	..	496	..	..	3,981
1820	8,398	..	..	..	..	1,361	..	..	9,759
1830	10,688	..	..	..	295	6,171	..	..	17,154
1840	41,908	..	..	6,358	877	13,959	..	..	63,102
1850	111,924	..	..	27,798	2,310	24,641	..	..	166,673
1860	150,695	(b)207,932	(b)11,239	61,242	5,749	40,168	..	..	477,023
1870	225,871	326,695	46,051	89,652	9,624	47,360	..	..	745,262
1880	336,190	408,047	87,027	128,955	12,566	54,222	..	..	1,027,017
1890	510,571	538,209	168,864	152,898	19,648	68,334	..	..	1,458,524
1900	644,258	594,440	219,163	176,901	69,879	83,137	(r) 569	..	1,788,347
1910	785,674	654,926	273,503	200,311	118,861	94,937	563	..	2,128,773
1920	1,023,777	774,106	354,069	245,706	154,428	105,493	1,078	(b) 910	2,659,567
1930	1,251,934	900,183	435,177	285,849	198,742	111,792	1,365	3,987	3,189,020
1933d	1,288,691	919,349	451,684	291,019	205,898	115,253	1,454	4,298	3,277,646
1934d	1,301,112	926,854	457,361	291,958	207,589	114,595	1,522	4,391	3,305,338
1935d	1,313,376	930,855	462,949	293,095	210,884	115,299	1,640	4,526	3,332,624
1936d	1,326,316	935,648	468,828	294,935	213,373	116,735	1,754	4,798	3,362,387
1937d	1,342,357	940,017	474,901	296,144	216,492	118,434	1,770	5,091	3,395,206
1938d	1,356,137	947,065	480,259	298,238	219,741	119,692	1,889	5,345	3,428,366
1939de	1,373,057	953,663	488,057	300,101	223,315	120,062	2,151	5,846	3,466,242
1940de	1,388,651	967,881	494,740	301,171	225,342	120,352	2,637	6,304	3,507,078
1941de	1,402,547	981,806	500,502	304,721	226,371	119,982	2,505	6,430	3,544,954
1942de	1,420,401	991,829	503,158	307,467	229,839	119,997	2,235	6,471	3,581,397
1943de	1,434,534	1,002,067	511,846	310,372	231,875	121,186	3,189	6,430	3,621,499
1944de	1,451,488	1,011,065	519,407	314,177	235,474	122,596	3,242	6,780	3,664,229
1945de	1,468,312	1,020,323	528,035	318,294	238,498	124,426	3,294	7,149	3,708,331
1946de	1,481,748	1,033,374	533,818	323,180	241,663	126,503	3,379	7,567	3,751,202
1947	1,501,232	1,044,739	541,341	329,012	247,192	132,841	3,588	7,814	3,800,757
1948	1,530,354	1,065,675	552,535	334,869	253,946	134,856	4,429	8,165	3,884,820

(a) Details as to sex not available for years 1788 and 1790. (b) Previously included with New South Wales. (c) Previously included with South Australia in which Northern Territory was incorporated prior to 1911. (d) Adjusted in accordance with the final results of the Census of 30th June, 1947. (e) See note (d) on next page.

ESTIMATED POPULATION: 1788 TO 1948—*continued*.

As at 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
PERSONS.									
1788	859	..	..	..	..	..	..	..	859
1790	2,056	..	..	..	..	..	..	..	2,056
1800	5,217	..	..	..	..	..	..	..	5,217
1810	10,006	..	..	..	..	1,470	..	..	11,566
1820	28,024	..	..	..	..	5,519	..	..	33,543
1830	44,588	..	..	..	1,172	24,279	..	..	70,039
1840	127,468	..	..	14,630	2,311	45,999	..	..	190,408
1850	206,900	..	..	63,700	5,886	68,870	..	..	405,356
1860	348,546	(a) 538,234	(a) 28,056	125,582	15,346	89,821	..	..	1,145,585
1870	497,992	723,925	115,272	184,546	25,135	100,886	..	..	1,647,756
1880	741,142	858,605	211,040	276,393	29,561	114,790	..	..	2,231,531
1890	1,113,275	1,133,728	392,116	318,947	48,502	144,787	..	..	3,151,355
1900	1,360,305	1,196,213	493,847	357,250	179,967	172,900	(b) 4,857	..	3,765,339
1910	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301	..	4,425,083
1920	2,091,722	1,527,909	750,624	491,006	331,323	212,752	3,989	(a) 1,972	5,411,297
1930	2,546,353	1,792,605	916,736	574,467	431,610	225,297	4,904	8,719	6,500,751
1933c	2,613,604	1,824,217	949,144	582,746	440,642	232,175	4,827	9,340	6,656,695
1934c	2,636,463	1,836,660	959,844	584,480	443,729	231,638	4,968	9,456	6,707,247
1935c	2,658,072	1,841,595	971,297	586,762	449,623	233,423	5,130	9,760	6,755,662
1936c	2,682,320	1,849,607	982,978	589,770	454,200	235,773	5,361	10,404	6,810,413
1937c	2,711,543	1,856,991	994,580	591,797	460,542	239,570	5,426	11,043	6,871,492
1938c	2,737,191	1,871,009	1,005,523	595,842	466,684	242,119	5,730	11,721	6,935,909
1939c	2,766,415	1,883,133	1,020,005	599,313	472,380	243,256	7,287	13,033	7,004,912
1940c	2,790,948	1,914,918	1,031,452	599,056	474,076	244,002	8,074	14,160	7,077,586
1941c	2,813,056	1,946,425	1,038,471	606,366	473,213	242,135	9,769	14,163	7,143,598
1942c	2,848,140	1,962,558	1,037,925	610,978	476,655	242,437	8,291	14,112	7,201,096
1943c	2,870,711	1,981,616	1,054,584	616,027	478,264	244,253	10,405	13,798	7,269,658
1944c	2,901,039	1,997,954	1,068,255	623,030	484,775	246,880	10,477	14,605	7,347,024
1945c	2,932,998	2,015,107	1,081,864	630,882	490,088	250,280	10,546	15,432	7,430,197
1946c	2,962,392	2,039,769	1,096,831	640,418	496,973	254,570	10,642	16,386	7,517,981
1947	3,007,582	2,061,689	1,110,821	653,065	508,881	268,515	10,991	17,084	7,638,628
1948	3,062,344	2,106,315	1,132,565	665,927	522,330	275,142	12,494	17,763	7,794,880

(a) Previously included with New South Wales. (b) Previously included with South Australia in which Northern Territory was incorporated prior to 1911. (c) Adjusted in accordance with the final results of the Census of 30th June, 1947. (d) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

Estimates of population for intercensal years are obtained by applying the vital and migration statistics for those years to the numbers recorded at the Census. Figures for interstate migration are liable to error owing to the impracticability of tracing movements of motor traffic. The estimates of populations of the Australian Capital Territory and the Northern Territory are particularly affected by this difficulty. In view of the uncertainty of war-time records of interstate migration, the populations of the States subsequent to 30th June, 1943, and until the 1947 Census, were estimated on the basis of natural increase, deaths of defence personnel and oversea migration.

The extent of the unrecorded movement of population during the preceding intercensal period is determined when a Census is taken and it is the custom to adjust these intercensal estimates on the basis of the Census results. Estimates of population previously published for the intercensal period 1933-47 have now been revised in accordance with the final results of the 1947 Census.

The results of the 1947 Census of the Australian Territories will be found in § 11 of this chapter.

A comparison of annual rates of growth of population of Australia and other countries will be found in § 4 par. 4 of this chapter.

The growth of the population of Australia and of each State and Territory thereof is illustrated by the graph accompanying this chapter on page 533.

3. **Mean Population.**—(i) *Method of Calculation.* From 1901 onwards the mean population for any year has been calculated by the formula :—

$$\text{Mean Population} = \frac{a + 4b + 2c + 4d + e}{12}$$

where *a*, *b*, *c*, *d* and *e*, respectively, are the populations at the end of the quarter immediately preceding the year and at the end of each of the four succeeding quarters, e.g., in the case of a calendar year, 31st December of the preceding year and 31st March, 30th June, 30th September and 31st December of the year under consideration. This formula gives a close approximation to the mean of a theoretical population progressing smoothly through the five values *a*, *b*, *c*, *d*, *e*. Prior to 1901 the mean population was calculated only for calendar years and was obtained by taking the arithmetic mean of the populations at the end of the previous year and the year in question.

(ii) *Calendar Years.* The following table shows the mean population, adjusted where applicable in accordance with the final results of the 1947 Census, for each State and Territory for the calendar years 1933 to 1948 :—

MEAN POPULATION : CALENDAR YEARS, 1933 TO 1948.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Year ended 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
1933 ..	2,601,799	1,830,497	945,481	581,034	438,780	228,450	4,863	9,078	6,629,982
1934 ..	2,623,717	1,830,326	955,810	583,474	442,354	229,289	4,949	9,434	6,679,353
1935 ..	2,645,875	1,838,206	966,654	585,268	446,874	229,867	5,133	9,736	6,727,613
1936 ..	2,668,314	1,845,941	979,297	587,934	452,294	231,426	5,303	10,294	6,780,803
1937 ..	2,695,351	1,853,765	990,643	589,663	457,328	234,463	5,476	10,901	6,837,590
1938 ..	2,722,378	1,865,251	1,001,996	593,242	463,808	236,328	5,804	11,534	6,900,341
1939(a)	2,750,205	1,878,918	1,015,043	597,048	469,780	238,845	6,382	12,505	6,968,726
1940(a)	2,777,898	1,900,426	1,026,541	599,136	473,397	241,134	8,354	13,775	7,040,661
1941(a)	2,800,537	1,932,412	1,036,555	601,193	473,988	240,389	10,279	14,629	7,109,982
1942(a)	2,831,080	1,959,496	1,056,016	609,172	476,619	241,087	8,946	14,223	7,176,639
1943(a)	2,857,547	1,973,533	1,047,441	613,327	476,745	242,860	9,574	13,644	7,234,651
1944(a)	2,886,204	1,989,870	1,061,467	619,409	481,498	245,618	10,440	14,200	7,308,706
1945(a)	2,917,415	2,006,649	1,076,610	627,102	487,510	248,596	10,512	15,012	7,389,406
1946(a)	2,945,220	2,025,475	1,090,238	635,127	492,771	252,192	10,568	15,883	7,467,474
1947 ..	2,985,073	2,053,648	1,105,360	646,294	502,978	257,127	10,891	16,903	7,578,928
1948 ..	3,029,573	2,089,999	1,123,416	658,239	514,843	264,604	12,188	18,172	7,711,034

(a) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

(iii) *Financial Years.* The mean population for financial years is widely used in connexion with rates for those statistics which are tabulated on a financial year basis. The following table shows the mean population, adjusted where applicable in accordance with the final results of the 1947 Census, for each State and Territory for the years ended 30th June, 1934 to 1948:—

MEAN POPULATION : FINANCIAL YEARS, 1933-34 TO 1947-48.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Ter.	Australia.
1934 ..	2,613,141	1,824,660	950,462	582,461	440,736	229,105	4,801	9,383	6,654,839
1935 ..	2,634,587	1,835,578	961,200	584,354	444,275	229,339	5,045	9,540	6,703,918
1936 ..	2,656,895	1,841,636	972,767	586,514	449,728	230,680	5,204	9,666	6,753,399
1937 ..	2,681,299	1,850,071	984,956	588,752	454,532	232,651	5,376	10,617	6,808,254
1938 ..	2,709,664	1,858,585	996,448	591,314	460,642	235,628	5,612	11,180	6,869,073
1939 ..	2,735,400	1,872,287	1,008,207	595,131	466,806	237,637	5,932	11,965	6,933,455
1940(a)	2,764,224	1,886,751	1,021,426	598,790	472,060	240,023	7,254	13,224	7,003,752
1941(a)	2,790,087	1,916,727	1,032,122	598,000	474,180	241,009	9,540	14,310	7,076,875
1942(a)	2,813,385	1,948,710	1,036,690	605,952	474,833	240,358	9,878	14,334	7,144,140
1943(a)	2,845,805	1,965,473	1,040,433	610,925	476,980	241,704	8,723	14,017	7,204,069
1944(a)	2,871,452	1,981,997	1,054,810	616,151	478,271	244,178	10,408	13,798	7,271,065
1945(a)	2,901,459	1,998,202	1,068,630	623,104	484,720	246,971	10,477	14,607	7,348,170
1946(a)	2,932,366	2,015,197	1,084,125	630,921	489,982	250,309	10,537	15,431	7,428,868
1947(a)	2,963,056	2,039,348	1,097,303	640,352	497,006	254,553	10,676	16,381	7,518,675
1948 ..	3,006,481	2,069,167	1,112,722	652,285	508,860	261,781	11,310	17,596	7,640,202

(a) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

4. Proportion of Area and Population, Density and Masculinity.—A previous table showed the estimated number of persons in each of the States and Territories on 31st December, 1948. In the following table the percentages of the total area and of the total population represented by each State or Territory are given, together with the density and the masculinity of population:—

DENSITY AND MASCULINITY OF POPULATION, 1948.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	Percentage of Total Area.	Percentage of Estimated Population, 31st December, 1948.			Density. (a)	Masculinity. (b)
		Males.	Females.	Persons.		
	%	%	%	%		
New South Wales ..	10.40	39.18	39.39	39.29	9.90	100.11
Victoria ..	2.96	26.61	27.43	27.02	23.97	97.65
Queensland ..	22.54	14.83	14.22	14.53	1.69	104.98
South Australia ..	12.78	8.47	8.62	8.54	1.75	98.86
Western Australia ..	32.81	6.86	6.54	6.70	0.54	105.69
Tasmania ..	0.88	3.59	3.47	3.53	10.50	104.03
Northern Territory ..	17.60	0.21	0.12	0.16	0.02	182.10
Australian Capital Territory ..	0.03	0.25	0.21	0.23	18.92	117.55
Australia ..	100.00	100.00	100.00	100.00	2.62	100.65

(a) Number of persons per square mile.

(b) Number of males per 100 females.

Additional information regarding density and masculinity of population appears in later sections of this chapter.

5. **Urban and Rural Distribution.**—At the 1947 Census, information was obtained regarding the distribution of the population amongst metropolitan, provincial and rural areas. Metropolitan Divisions relate to the capital cities of the States and adjoining urban municipal areas within boundaries used for Census purposes at the dates of the respective Censuses. At the 1947 Census the Metropolitan Division of Victoria included areas (with a population of 30,490 persons) not included in that division at the 1933 Census when the population was 991,934. No changes occurred in boundaries of Metropolitan Divisions in other States.

Urban Provincial Divisions comprise the capital cities of the Territories and, in States other than Tasmania, cities and towns outside the Metropolitan Divisions which are separately incorporated. In Tasmania, where most of the towns included are not separately incorporated, boundaries were determined for Census purposes. In New South Wales a number of towns which in 1933 were separately incorporated have since been included in shires.

Rural Divisions comprise the remaining portion of each Territory and State and are affected by the intercensal changes in the areas of the Metropolitan and Urban Provincial Divisions. Figures for Rural Divisions represent therefore only a broad general classification based on administrative rather than geographical considerations. For instance, in New South Wales most of the increase in population shown for "Rural Division" was due to abolition of municipalities which in 1933 were classified as Urban Provincial; in Victoria a large part of the decrease in population shown for "Rural Division" was due to transfer in 1947 to the Metropolitan Division of adjoining urban parts of shire area.

Persons on board ships in Australian ports or travelling on long-distance trains or planes throughout Census night were classed as migratory.

The results obtained at the Census for each State and Territory are shown in the following table:—

URBAN AND RURAL POPULATION: 1947 CENSUS.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Division.	1947 Census. (Final Count.)			Percentage of Total Population of State.		Percentage Increase since the 1933 Census.
	Males.	Females.	Persons.	1933 Census.	1947 Census.	

NEW SOUTH WALES.						
Urban—				%	%	%
Metropolitan	714,821	769,183	1,484,004	47.50	49.72	20.14
Provincial ..	329,730	332,226	661,956	21.74	22.18	17.07
Rural ..	441,024	390,512	831,536	30.57	27.86	4.58(a)
Migratory ..	6,636	706	7,342	0.19	0.24	45.70
Total ..	1,492,211	1,492,627	2,984,838	100.00	100.00	14.76

(a) See letterpress above.

URBAN AND RURAL POPULATION, ETC.—*continued.*

Division.	1947 Census. (Final Count.)			Percentage of Total Population of State.		Percentage Increase since the 1933 Census.
	Males.	Females.	Persons.	1933 Census.	1947 Census.	
VICTORIA.						
Urban—				%	%	%
Metropolitan	588,540	637,869	1,226,409	54.49	59.69	23.64
Provincial ..	111,182	120,261	231,443	10.89	11.26	16.78
Rural ..	311,052	281,946	592,998	34.53	28.86	—5.66a
Migratory ..	3,093	758	3,851	0.09	0.19	144.04
Total ..	1,013,867	1,040,834	2,054,701	100.00	100.00	12.88

QUEENSLAND.

Urban—				%	%	%
Metropolitan	195,102	206,928	402,030	31.63	36.34	34.12
Provincial ..	127,854	131,074	258,928	21.02	23.40	30.02
Rural ..	242,807	200,763	443,570	46.92	40.09	—0.23
Migratory ..	1,708	179	1,887	0.43	0.17	—53.44
Total ..	567,471	538,944	1,106,415	100.00	100.00	16.77

SOUTH AUSTRALIA.

Urban—				%	%	%
Metropolitan	183,099	199,355	382,454	53.81	59.20	22.34
Provincial ..	32,646	33,265	65,911	8.86	10.20	28.09
Rural ..	102,760	93,247	196,007	36.97	30.34	—8.73
Migratory ..	1,526	175	1,701	0.36	0.26	—19.46
Total ..	320,031	326,042	646,073	100.00	100.00	11.21

WESTERN AUSTRALIA.

Urban—				%	%	%
Metropolitan	131,670	140,858	272,528	47.27	54.24	31.38
Provincial ..	26,279	25,521	51,800	10.21	10.31	15.61
Rural ..	97,475	77,696	175,171	41.79	34.86	—4.49
Migratory ..	2,652	329	2,981	0.73	0.59	—6.79
Total ..	258,076	244,404	502,480	100.00	100.00	14.50

(a) See letterpress on preceding page.

NOTE.—Minus sign (—) denotes decrease.

URBAN AND RURAL POPULATION, ETC.—*continued.*

Division.	1947 Census. (Final Count.)			Percentage of Total Population of State.		Percentage Increase since the 1933 Census.
	Males.	Females.	Persons.	1933 Census.	1947 Census.	

TASMANIA.						
Urban—				%	%	%
Metropolitan	36,518	40,016	76,534	26.54	29.77	26.70
Provincial ..	36,291	38,525	74,816	24.95	29.10	31.77
Rural ..	55,771	49,254	105,025	48.23	40.85	—4.32
Migratory ..	664	39	703	0.28	0.28	8.32
Total ..	129,244	127,834	257,078	100.00	100.00	12.95

NORTHERN TERRITORY.

Urban—				%	%	%
Provincial ..	1,668	870	2,538	32.29	23.36	62.07
Rural ..	5,581	2,611	8,192	66.16	75.37	155.22
Migratory ..	129	9	138	1.55	1.27	84.00
Total ..	7,378	3,490	10,868	100.00	100.00	124.04

AUSTRALIAN CAPITAL TERRITORY.

Urban—				%	%	%
Provincial ..	8,121	7,035	15,156	81.87	89.65	106.91
Rural ..	971	778	1,749	18.13	10.35	7.83
Migratory ..	..	..	..	..	..	..
Total ..	9,092	7,813	16,905	100.00	100.00	88.95

AUSTRALIA.

Urban—				%	%	%
Metropolitan	1,849,750	1,994,209	3,843,959	46.87	50.72	23.70
Provincial ..	673,771	688,777	1,362,548	16.97	17.08	21.15
Rural ..	1,257,441	1,096,807	2,354,248	35.91	31.06	-1.12
Migratory ..	16,408	2,195	18,603	0.25	0.24	11.37
Total ..	3,797,370	3,781,988	7,579,358	100.00	100.00	14.32

NOTE.—Minus sign (—) denotes decrease.

At 30th June, 1947, the Metropolitan Divisions contained 50.72 per cent. of the total population of Australia as compared with 46.87 per cent. at the 1933 Census. Victoria had the largest percentage of population residing in the metropolitan area (59.69) but was closely followed in this respect by South Australia (59.20). During the intercensal period, however, the highest rates of increase in metropolitan population were experienced in Queensland and Western Australia.

A feature of the metropolitan population is its high femininity. In 1933, 52.5 per cent. of the metropolitan population was composed of females; in 1947 the proportion had fallen slightly to 51.9 per cent., being highest in Tasmania at 52.3 per cent.

6. Metropolitan Population : Australia and Other Countries.—In Australia there is an abnormal concentration of population in the capital cities, which are the only cities of outstanding importance in the various States. A comparison with the capitals of the more important countries is given in the following table. There is some doubt as to the comparability of the figures because of the abnormal conditions during the war and immediately following the war.

METROPOLITAN POPULATION : AUSTRALIA AND OTHER COUNTRIES.

State or Country.	Metropolis.	Year.	Metropolitan Population.
New South Wales	Sydney	1947	(a) 1,484,004
Victoria	Melbourne	1947	(a) 1,226,409
Queensland	Brisbane	1947	(a) 402,030
South Australia	Adelaide	1947	(a) 382,454
Western Australia	Perth	1947	(a) 272,528
Tasmania	Hobart	1947	(a) 76,534
England	London (b)	1948	8,349,870
Scotland	Edinburgh	1948	489,900
Northern Ireland	Belfast	1948	454,226
Eire	Dublin	1947	513,500
Canada	Montreal (c)(d)	1941	1,139,921
New Zealand	Wellington(e)	1948	184,730
Union of South Africa	Capetown(f)	1946	214,201
Argentina	Buenos Aires	1945	2,620,827
Belgium	Brussels	1946	915,604
Brazil	Rio de Janeiro	1938	1,849,000
Czechoslovakia	Prague	1947	921,416
Denmark	Copenhagen	1945	927,404
Egypt	Cairo	1947	2,100,486
France	Paris	1946	2,725,374
Germany	Berlin	1946	3,199,938
Greece	Athens	1938	499,360
Hungary	Budapest	1947	1,073,444
Italy	Rome	1948	1,610,000
Japan	Tokyo (g)	1940	6,778,804
Netherlands	Amsterdam	1948	821,000
Norway	Oslo	1946	289,000
Poland	Warsaw	1946	478,755
Portugal	Lisbon	1947	785,000
Spain	Madrid	1948	1,277,000
Sweden	Stockholm	1948	703,000
U.S.A.	New York (d)	1948	8,067,000
U.S.S.R. (Russia)	Moscow	1939	4,137,018

(a) Final Census count, exclusive of full-blood aborigines. (b) Greater London civilian population. (c) Greater Montreal. (d) Principal City. (e) Excluding Maoris. (f) European population. (g) Greater Tokyo.

NOTE.—The population of Canberra in 1948 was 17,000.

7. **Principal Urban Areas.**—The following table shows the population of the principal urban incorporated areas in each State and Territory of Australia at the 1947 Census :—

**POPULATION OF PRINCIPAL URBAN INCORPORATED AREAS: AUSTRALIA,
1947 CENSUS (FINAL COUNT).**

(EXCLUDING FULL-BLOOD ABORIGINALS.)

City or Town.	Population.	City or Town.	Population.
New South Wales—		Queensland—continued.	
Sydney and Suburbs	1,484,004	Toowoomba	33,290
Newcastle and Suburbs	127,138	Ipswich	26,218
Broken Hill	27,054	Cairns	16,644
Maitland	19,151	Bundaberg	15,926
Wollongong (a)	18,116	Maryborough	14,395
Goulburn	15,991	Mackay	13,486
Fairfield	15,087	Redcliffe	8,871
Wagga Wagga	15,340	Southport	8,430
Lismore	15,214	Gympie	8,413
Lithgow	14,461	Charters Towers	7,561
Albury	14,412	Warwick	7,129
Orange	13,780	Gladstone	5,244
Cessnock	13,029		
Liverpool	12,642		
Tamworth	12,071	South Australia—	
Grafton and Grafton South	12,025	Adelaide and Suburbs	382,454
Bathurst	11,871	Port Pirie	12,019
Illawarra North (a)	11,810	Whyalla	7,845
Cabramatta and Canley Vale	10,966	Mount Gambler	6,771
Dubbo	9,545	Gawler	4,436
Katoomba	8,781	Port Augusta	4,351
Armidale	7,809	Port Lincoln	3,972
Parkes	6,897	Murray Bridge	3,600
Casino	6,698	Peterborough	2,890
Inverell	6,530		
Kempsey	6,330	Western Australia—	
Forbes	5,949	Perth and Suburbs	(f) 272,528
Cowra	5,473	Kalgoorlie and Suburbs	22,376
Glen Innes	5,453	Bunbury	6,240
		Geraldton	5,972
		Albany	4,759
		Northam	4,652
		Collie	4,507
Victoria—		Tasmania—	
Melbourne and Suburbs	1,226,409	Hobart and Suburbs	76,534
Geelong (b)	(e) 44,561	Launceston and Suburbs	40,449
Ballaarat (c)	(e) 40,181	Burnie	7,235
Bendigo (d)	(e) 30,779	Devonport	7,497
Warrnambool	9,993	Queenstown	3,598
Mildura	9,527	Ulverstone	3,432
Shepparton	7,914		
Hamilton	7,180	Northern Territory—	
Wangaratta	6,670	Darwin	2,538
Horsham	6,388		
Colac	6,381	Australian Capital Territory—	
Maryborough	6,198	Canberra	15,156
Ararat	5,957		
Castlemaine	5,809		
Queensland—			
Brisbane and Suburbs	402,030		
Rockhampton	34,988		
Townsville	34,109		

(a) From 24th September, 1947, the municipalities of Illawarra North and Wollongong and the shires of Bulli and Illawarra Central were united to form the City of Greater Wollongong. (b) Comprises municipalities of Geelong, Geelong West, and Newtown and Chilwell. (c) Comprises municipalities of Ballarat and Sebastopol. (d) Comprises municipalities of Bendigo and Eaglehawk. (e) Exclusive of urban population in any contiguous shire. (f) Includes Fremantle and suburbs, 27,934.

8. **Provincial Urban Areas.**—In par. 5, pages 525-7, the percentage of the total population of each State which was located in incorporated urban provincial areas at the 1933 and 1947 Census is shown. In the following table, however, the aggregate population at the 1947 Census of all cities and towns, outside the metropolitan area of each State, with 2,000 or more and 3,000 or more inhabitants is shown, irrespective of whether such centres are incorporated separately or not. In addition, the percentage of the aggregate population of these cities and towns to the total population of the State is shown.

AGGREGATE POPULATION OF CITIES AND TOWNS OF SPECIFIED SIZE : 1947 CENSUS.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

State or Territory.	2,000 and over.			3,000 and over.		
	Number.	Population.	Percentage of Population.	Number.	Population.	Percentage of Population.
			%			%
New South Wales ..	122	763,562	25.58	76	652,986	21.88
Victoria ..	62	334,199	16.26	37	272,454	13.26
Queensland ..	34	297,909	26.93	26	279,317	25.25
South Australia ..	11	52,812	8.17	7	43,084	6.67
Western Australia ..	10	51,987	10.35	7	44,493	8.85
Tasmania ..	6	62,413	24.29	5	59,479	23.14
Northern Territory ..	1	2,538	23.35	..	..	..
Australian Capital Territory ..	1	15,156	89.66	1	15,156	89.66
Total ..	247	1,580,576	20.85	159	1,366,969	18.03

9. Principal Cities in the World.—The following table shows the population of the world's largest cities at the latest available date. There is some doubt as to the comparability of the figures because of the abnormal conditions during and immediately following the war.

POPULATION OF THE WORLD'S LARGEST CITIES. (Cities in the British Commonwealth are printed in italics.)

Country.	City.	Year.	City Population ('000).	Country.	City.	Year.	City Population ('000).
England ..	<i>London (a)</i> ..	1948	8,350	Singapore ..	<i>Singapore</i> ..	1947	933
U.S.A. ..	New York ..	1948	8,067	Egypt ..	Alexandria ..	1947	928
Japan ..	Tokyo (b) ..	1940	6,779	Denmark ..	Copenhagen ..	1945	927
U.S.S.R. ..	Moscow ..	1939	4,137	Czechoslovakia ..	Prague ..	1947	921
China ..	Shanghai ..	1946	3,599	Belgium ..	Brussels ..	1946	916
U.S.A. ..	Chicago ..	1940	3,397	Canada ..	<i>Toronto (c)</i> ..	1941	900
Japan ..	Osaka ..	1940	3,252	India ..	<i>Madras</i> ..	1948	893
Germany ..	Berlin ..	1946	3,200	Siam ..	Bangkok ..	1948	883
U.S.S.R. ..	Leningrad ..	1939	3,191	U.S.A. ..	Cleveland ..	1940	878
India ..	<i>Calcutta (c)</i> ..	1948	2,802	China ..	Mukden ..	1946	864
France ..	Paris ..	1946	2,725	U.S.S.R. ..	Kiev ..	1939	840
Argentina ..	Buenos Aires ..	1945	2,621	Turkey ..	Istanbul ..	1945	843
Egypt ..	Cairo ..	1947	2,100	U.S.S.R. ..	Kharkov ..	1939	833
U.S.A. ..	Philadelphia ..	1940	1,931	Netherlands ..	Amsterdam ..	1948	821
Brazil ..	Rio de Janeiro ..	1938	1,849	U.S.A. ..	St. Louis ..	1940	816
U.S.A. ..	Detroit ..	1948	1,800	U.S.S.R. ..	Baku ..	1939	800
Mexico ..	Mexico City ..	1947	1,757	England ..	<i>Liverpool</i> ..	1948	796
China ..	Nanking ..	1946	1,755	Portugal ..	Lisbon ..	1947	785
India ..	<i>Bombay</i> ..	1948	1,731	China ..	Hankow ..	1931	778
China ..	Tientsin ..	1946	1,718	U.S.A. ..	Boston ..	1940	771
China ..	Peking ..	1946	1,688	Uruguay ..	Montevideo ..	1941	770
Italy ..	Rome ..	1947	1,610	Philippines ..	Manila ..	1947	767
Austria ..	Vienna ..	1948	1,548	Germany ..	Munich ..	1947	761
U.S.A. ..	Los Angeles ..	1940	1,504	South Africa ..	<i>Johannesburg</i> ..	1946	758
Australia ..	<i>Sydney</i> ..	1947	1,484	China ..	Tsingtao ..	1946	756
Germany ..	Hamburg ..	1946	1,403	U.S.A. ..	Washington ..	1942	750
Japan ..	Nagoya ..	1948	1,328	India ..	<i>Hyderabad</i> ..	1941	739
Spain ..	Madrid ..	1948	1,277	Italy ..	Turin ..	1948	720
Brazil ..	Sao Paulo ..	1938	1,269	Sweden ..	Stockholm ..	1948	703
Italy ..	Milan ..	1947	1,268	Persia ..	Tehran ..	1942	699
Australia ..	<i>Melbourne</i> ..	1947	1,226	England ..	<i>Manchester</i> ..	1948	697
Spain ..	Barcelona ..	1948	1,225	U.S.A. ..	Pittsburgh ..	1940	672
China ..	Canton ..	1936	1,223	Pakistan ..	<i>Lahore</i> ..	1941	672
Korea ..	Seoul ..	1946	1,142	Cuba ..	Havana ..	1943	660
Canada ..	<i>Montreal (d)</i> ..	1941	1,140	Netherlands ..	Rotterdam ..	1948	660
England ..	<i>Glasgow</i> ..	1948	1,106	Italy ..	Genoa ..	1947	649
Japan ..	<i>Hiroshima</i> ..	1948	1,104	U.S.S.R. ..	Gorki ..	1939	644
Japan ..	Kyoto ..	1940	1,050	Hong Kong ..	<i>Hong Kong</i> ..	1938	641
Hungary ..	Budapest ..	1947	1,073	Chile ..	Santiago ..	1940	640
China ..	Chungking ..	1946	1,062	France ..	Marseilles ..	1946	636
Italy ..	Naples ..	1948	1,002	U.S.A. ..	San Francisco ..	1940	635
Rumania ..	Bucharest ..	1945	985	China ..	Wenchow ..	1931	631
Japan ..	Yokohama ..	1940	968	Germany ..	Leipzig ..	1946	608
Japan ..	Kobe ..	1940	967	China ..	Changsha ..	1931	607
U.S.A. ..	Baltimore ..	1947	947	U.S.S.R. ..	Odessa ..	1939	604

(a) Greater London civilian population.
(d) Greater Montreal.

(b) Greater Tokyo.

(c) Includes Howrah.

§ 4. Elements of Increase.

1. **Natural Increase.**—(i) *General.* The two factors which contribute to the growth of a population are the "natural increase," i.e., excess of births over deaths, and the "net migration," i.e., the excess of arrivals over departures. In earlier issues of the Official Year Book particulars of the natural increase from 1861 are given for each sex and State (see No. 22, page 899). In the following table particulars for each sex are given in States for each quinquennium from 1901 to 1945 and for the ten years 1939-48. The natural increase for Australia from 1861 to 1948 inclusive was 5,249,367, consisting of 2,444,298 males and 2,805,069 females, and represented 78.95 per cent. of the total increase in population. During the present century the rate of natural increase grew until it reached the maximum rate of 17.44 per thousand of population in 1914, but it steadily declined after that year to 7.07 in 1934. The figure rose to 7.99 per thousand in 1937 following small gains during each of the previous three years, fell slightly to 7.71 in 1939, but rose sharply during the war and in the post-war period, reaching the level of 14.37 in 1947. In 1948 it dropped to 13.12.

It should be particularly noted that from September, 1939, until June, 1947, "natural increase" was regarded as excess of births over civilian deaths, i.e., no account was taken of deaths of defence personnel.

POPULATION: NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS),
1901 TO 1948.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
MALES.									
1901-05..	51,179	34,332	16,628	12,149	8,283	7,955	—223	(a)	130,303
1906-10..	64,127	38,948	21,415	14,500	10,762	8,703	—264	(a)	158,191
1911-15..	77,070	46,160	27,497	18,673	12,730	9,386	—201	78	191,393
1916-20..	72,030	41,388	26,894	16,413	9,787	8,673	—125	75	175,135
1921-25..	80,860	49,254	28,941	16,721	10,284	8,543	—68	37	194,572
1926-30..	72,430	43,756	25,645	14,583	11,245	7,001	—131	175	174,704
1931-35..	51,566	25,286	20,627	8,686	8,576	5,810	—93	270	120,728
1936-40(b)	49,092	26,141	23,145	9,187	9,409	6,040	39	397	123,450
1941-45(b)	68,071	42,650	31,871	15,563	12,391	7,234	15	740	178,535
1939(b) ..	9,441	4,949	4,616	1,871	1,985	1,247	..	107	24,216
1940(b) ..	10,289	5,463	5,067	2,034	1,801	1,209	27	97	25,987
1941(b) ..	11,187	6,892	5,524	2,334	2,220	1,268	3	124	29,552
1942(b) ..	10,698	6,882	5,260	2,201	2,046	1,400	—20	164	28,040
1943(b) ..	13,316	8,819	5,771	3,324	2,627	1,578	—3	143	35,575
1944(b) ..	15,866	9,498	7,113	3,630	2,880	1,362	19	154	40,522
1945(b) ..	17,004	10,559	8,203	4,074	2,618	1,617	16	155	44,246
1946(b) ..	18,652	12,839	7,682	4,623	3,494	2,165	20	210	49,685
1947(b) ..	19,743	13,130	8,661	5,048	3,802	2,314	86	265	53,049
1948 ..	17,453	12,017	8,255	4,559	3,867	2,129	77	299	48,656

(a) Part of New South Wales prior to 1911.
September, 1939, to June, 1947.

(b) Excess of births over civilian deaths from

NOTE.—Minus sign (—) denotes excess of deaths over births.

POPULATION: NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS)—
continued.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
FEMALES.									
1901-05..	59,163	39,831	22,910	12,701	11,468	8,027	28	(a)	154,128
1906-10..	71,297	42,629	26,048	14,754	13,354	8,522	33	(a)	176,637
1911-15..	87,074	50,258	33,463	19,318	16,262	9,604	62	78	216,119
1916-20..	81,799	42,886	32,273	16,825	13,185	8,821	135	72	195,996
1921-25..	89,438	49,685	34,289	17,595	13,839	8,837	127	82	213,892
1926-30..	80,733	44,417	31,128	15,407	14,406	6,893	126	203	193,313
1931-35..	60,300	28,216	26,036	9,228	12,352	5,953	156	280	142,521
1936-40(b)	60,628	28,464	28,091	10,057	13,626	6,574	220	437	148,997
1941-45(b)	75,809	42,538	36,709	15,654	16,029	7,420	232	826	195,217
1939(b) ..	11,747	5,375	6,202	2,008	2,715	1,331	50	100	29,528
1940(b) ..	12,950	6,206	6,142	2,275	2,834	1,398	60	111	31,976
1941(b) ..	13,242	6,992	6,465	2,343	3,129	1,363	91	172	33,797
1942(b) ..	12,730	7,072	6,284	2,365	2,779	1,466	29	152	32,877
1943(b) ..	15,079	8,971	6,887	3,339	3,267	1,492	34	165	39,234
1944(b) ..	17,094	9,358	8,022	3,697	3,512	1,344	39	160	43,226
1945(b) ..	17,664	10,145	9,051	3,910	3,342	1,755	39	177	46,083
1946(b) ..	20,016	12,320	8,694	4,729	3,858	2,133	57	226	52,033
1947(b) ..	21,206	12,794	9,581	5,054	4,349	2,463	125	295	55,867
1948 ..	19,378	12,257	9,141	4,563	4,379	2,322	130	311	52,481

PERSONS.

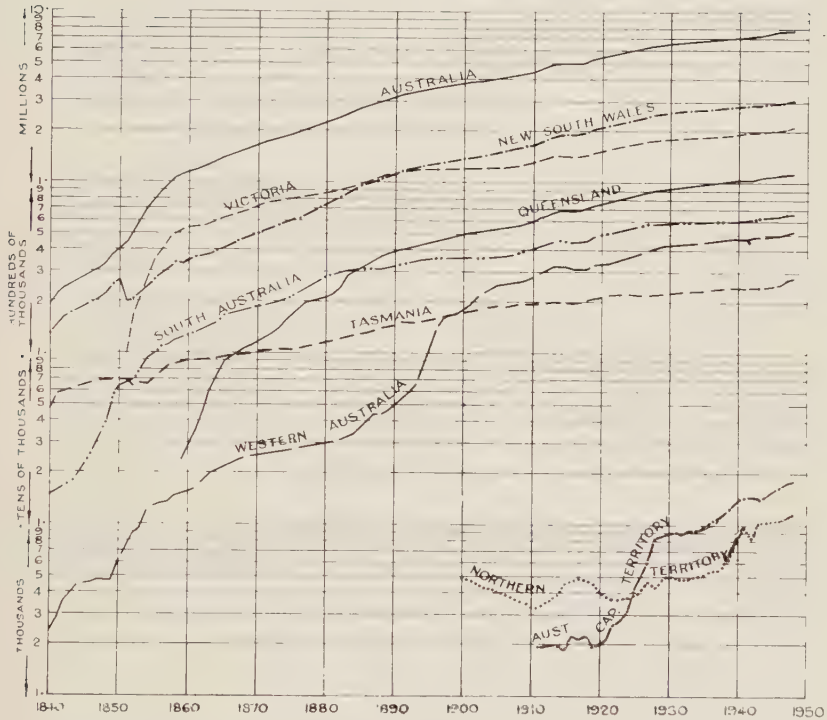
1901-05..	110,342	74,163	39,538	24,850	19,751	15,982	-195	(a)	284,431
1906-10..	135,424	81,577	47,403	29,254	24,116	17,225	-231	(a)	334,828
1911-15..	164,144	96,418	60,960	37,991	28,992	18,990	-139	156	407,512
1916-20..	153,829	84,274	59,167	33,238	22,972	17,494	10	147	371,131
1921-25..	170,298	98,939	63,230	34,316	24,123	17,380	59	119	408,464
1926-30..	153,163	88,173	56,773	29,990	25,651	13,894	- 5	378	368,017
1931-35..	111,866	53,502	46,663	17,914	20,928	11,763	63	550	263,249
1936-40(b)	109,720	54,605	52,136	19,244	23,035	12,614	259	834	272,447
1941-45(b)	143,880	85,188	68,580	31,217	28,420	14,654	247	1,566	373,752
1939(b) ..	21,188	10,324	10,818	3,879	4,700	2,578	50	207	53,744
1940(b) ..	23,239	11,669	11,209	4,309	4,635	2,607	87	208	57,993
1941(b) ..	24,429	13,884	11,989	4,677	5,349	2,631	94	296	63,349
1942(b) ..	23,428	13,954	11,544	4,566	4,825	2,875	9	316	61,517
1943(b) ..	28,395	17,790	12,658	6,663	5,894	3,070	31	308	74,809
1944(b) ..	32,960	18,856	15,135	7,327	6,392	2,706	58	314	83,748
1945(b) ..	34,668	20,704	17,254	7,984	5,960	3,372	55	332	90,329
1946(b) ..	38,668	25,159	16,376	9,352	7,352	4,298	77	436	101,718
1947(b) ..	40,949	25,924	18,242	10,102	8,151	4,777	211	560	108,916
1948 ..	36,831	24,274	17,396	9,122	8,246	4,451	207	610	101,137

(a) Part of New South Wales prior to 1911.
September, 1939, to June, 1947.

(b) Excess of births over civilian deaths from

NOTE.—Minus sign (—) denotes excess of deaths over births.

POPULATION OF AUSTRALIA, 1840 TO 1948 (RATIO GRAPH).



(See page 523.)

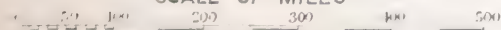
EXPLANATION.—This is a ratio graph, the vertical scale being logarithmic, and the curves rise and fall according to the rate of increase or decrease. Actual numbers are indicated by the scale at the side of the graph. The curves represent the estimated population of each State at 31st December each year.

N.S.WALES	2.984838
VICTORIA	2.054701
QUEENSLAND	1.106415
S.AUSTRALIA	646073
W.AUSTRALIA	502480
TASMANIA	257078
A.C.TERRITORY	16905
N.TERRITORY	10868

SYDNEY	1484004
MELBOURNE	1226409
BRISBANE	402030
ADELAIDE	382454
PERTH	272528
HOBART	76534
CANBERRA	15156
NEWCASTLE	127138

DISTRIBUTION OF POPULATION IN AUSTRALIA CENSUS 1947

SCALE OF MILES



GROUP	FROM		TO LESS THAN	
	PERSONS IN SQ MILES	PERSONS IN SQ MILES	PERSONS IN SQ MILES	PERSONS IN SQ MILES
A	0	1	1	8
B	1	8	1	1
C	1	1	4	1
D	4	1	16	1
E	16	1	32	1
F	32	1	64	1
G	64	1	128	1
H	128 & over	per sq mile		



POPULATION: NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS)—
continued.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
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RATE OF NATURAL INCREASE(a)—PERSONS.

1901-05..	15.59	12.31	15.34	13.92	18.07	17.85	- 8.8	(b)	14.60
1906-10..	17.25	13.11	16.99	15.44	18.52	18.37	-12.6	(b)	15.93
1911-15..	18.27	13.91	18.61	17.55	18.76	19.63	- 7.6	13.71	17.05
1916-20..	15.69	11.65	16.74	14.51	14.56	17.46	0.43	12.23	14.57
1921-25..	15.47	12.32	15.87	13.28	13.69	16.14	3.13	6.84	14.34
1926-30..	12.51	10.10	12.84	10.58	12.63	12.85	-0.22	9.60	11.72
1931-35..	8.61	5.89	9.88	6.17	9.54	10.33	2.54	12.00	7.95
1936-40(c)	8.06	5.84	10.40	6.48	9.94	10.66	8.10	14.00	7.89
1941-45(c)	10.05	8.62	13.02	10.14	11.86	12.02	4.84	21.85	10.30
1939(c) ..	7.70	5.49	10.66	6.50	10.00	10.79	7.83	16.55	7.71
1940(c) ..	8.37	6.14	10.92	7.19	9.79	10.81	10.41	15.10	8.23
1941(c) ..	8.72	7.18	11.57	7.78	11.29	10.94	9.14	20.23	8.91
1942(c) ..	8.28	7.12	11.14	7.50	10.12	11.93	1.01	22.22	8.57
1943(c) ..	9.94	9.01	12.08	10.86	12.36	12.64	3.24	22.57	10.34
1944(c) ..	11.42	9.48	14.26	11.83	13.28	11.02	5.56	22.11	11.46
1945(c) ..	11.88	10.32	16.03	12.73	12.23	13.56	5.23	22.12	12.22
1946(c) ..	13.13	12.42	15.02	14.72	14.92	17.04	7.29	27.45	13.62
1947(c) ..	13.72	12.62	16.50	15.63	16.21	18.53	19.37	33.13	14.37
1948 ..	12.16	11.61	15.48	13.86	16.02	16.82	16.98	33.57	13.12

(a) Excess of births over deaths per 1,000 mean population. (b) Part of New South Wales prior to 1911. (c) Excess of births over civilian deaths per 1,000 mean population from September, 1939, to June, 1947.

NOTE.—Minus sign (—) denotes excess of deaths over births.

The table above shows the decline which has taken place in the rate of natural increase in all States of Australia since the beginning of the century. The decline is evident notwithstanding the stepping-up of the rate occasioned by increased births since the commencement of the 1939-45 War and the overstatement due to the omission of deaths of defence personnel. During the first five years of the present century the average increment to the population of Australia by this means was 56,886 persons per annum. The increment rose to a maximum of 81,693 persons per annum in 1921-25, but thereafter fell to 52,650 persons per annum in the quinquennium 1931-35, increasing during 1936-40 to 54,489. During 1941-45 the average annual excess of births over civilian deaths was 74,750, which rose in 1947 to a record high level of 108,916, falling slightly to 101,137 in 1948.

(ii) *Comparison with other Countries.* Notwithstanding its low birth-rate, Australia has a higher rate of natural increase than most European countries, owing to the fact that its death-rate is very low. The following table gives a comparison between the rates of natural increase in 1948 for the several States of Australia and for the Dominion of New Zealand, and those of some of the principal countries for which such information is available. Corresponding annual rates for the period 1909-13 have also been appended.

NATURAL INCREASE OF POPULATION : VARIOUS COUNTRIES.

INCREASE PER ANNUM PER 1,000 MEAN POPULATION.

State or Country.	1909-13.	1948.	Country.	1909-13.	1948.
Australasia—			Europe—continued.		
Tasmania (a) ..	18.8	16.8	Germany ..	12.8	(c) 8.0
New Zealand (b) ..	17.1	16.4	France ..	0.8	(e) 8.0
Western Australia (a)	18.1	16.0	Scotland ..	10.7	7.6
Queensland (a) ..	17.9	15.5	England and Wales	10.7	7.1
South Australia (a)	16.8	13.9	Belgium ..	7.8	4.9
Australia (a) ..	16.7	13.1			
New South Wales (a)	18.0	12.2	Asia—		
Victoria (a) ..	13.6	11.6	Japan	13.1	22.0
Europe—					
Netherlands ..	15.1	18.1	Africa—		
Denmark ..	13.9	(e) 12.4	Union of South		
Spain ..	9.3	12.1	Africa (whites		
Norway ..	12.4	11.9	only)	(d)	18.3
Italy ..	12.8	11.0			
Northern Ireland ..	6.3	(e) 10.7	America—		
Eire ..	6.3	9.6	Canada	(d)	17.5
Sweden ..	10.4	8.6	United States ..	(d)	14.5
Switzerland ..	9.3	8.3			

(a) Excludes full-blood aboriginals,
on frontiers of 1937.

(d) Not available.

(b) Excludes Maoris.
(e) Year, 1947.

(c) Rate for year 1943 based

2. *Net Migration.**—The other factor of increase in the population, namely, the excess of arrivals over departures, known as “net migration,” is, from its nature, much more subject to variation than is the factor of “natural increase”.

Particulars of the increase by net migration are given below for quinquennial periods from 1901 to 1945 and annually for the ten years 1939-48. Disturbances in the war-time migration records were caused by interstate troop movements, which prevented accurate

* The subject of migration is dealt with at some length later in this chapter.

count of civilians travelling interstate. Interstate passenger traffic was, for this reason, excluded from migration records from 30th June, 1943 to the date of the Census, 30th June, 1947.

POPULATION: INCREASE BY NET MIGRATION, 1901 TO 1948.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
1901-05..	15,671	37,971	495	11,031	28,127	1,771	697	(a)	7,177
1906-10..	11,157	9,400	12,291	10,590	711	5,784	366	(a)	37,999
1911-15..	38,483	1,568	13,037	4,263	189	9,599	1,050	90	40,375
1916-20..	23,150	18,205	3,614	7,920	3,782	67	551	30	48,519
1921-25..	35,660	37,760	18,834	14,244	15,375	5,630	17	1,199	117,459
1926-30..	37,524	7,849	11,584	2,230	19,069	3,668	870	2,259	73,257
1931-35..	1,646	5,951	6,195	3,654	4,215	1,384	24	3	10,676
1936-40(b)	7,847	12,096	5,249	4,988	2,501	793	2,787	1,176	20,873
1941-45bc	6,614	17,502	6,487	2,202	9,261	4,312	889	1,822	5,325
1939 (b) ..	2,771	883	2,175	258	480	534	1,292	379	6,228
1940 (b) ..	1,458	12,577	354	3,347	2,728	794	1,164	238	5,298
1941 (b) ..	1,848	12,381	3,883	1,839	4,317	2,715	906	565	1,798
1942 (b) ..	10,505	3,030	6,780	699	1,636	848	1,185	549	3,236
1943 (b)(c)	1,903	2,913	3,671	392	2,892	748	1,168	708	1,109
1944 (b)(c)	579	237	100	20	38	1	..	..	935
1945 (b)(c)	439	585	605	36	378	..	..	..	117
1946 (b)(c)	2,680	783	1,443	2	321	58	12	..	5,299
1947 (b)(c)	3,820	2,442	2,206	1,736	2,278	5,316	52	22	8,576
1948 ..	10,187	11,073	2,295	2,444	2,828	2,483	585	29	32,524

MALES.

FEMALES.

1901-05..	1,566	21,984	2,398	8,448	22,293	726	81	(a)	9,616
1906-10..	9,390	10	7,780	4,403	1,867	4,023	148	(a)	19,279
1911-15..	48,612	25,051	12,054	5,389	10,650	5,658	271	118	96,487
1916-20..	21,294	985	2,776	3,863	4,530	2,211	47	34	22,190
1921-25..	24,660	19,443	12,154	7,482	6,706	5,138	244	744	65,807
1926-30..	33,326	12,532	3,537	341	9,363	4,293	278	2,048	56,450
1931-35..	1,093	2,943	1,125	2,284	578	2,644	88	47	210
1936-40(b)	14,414	9,409	1,509	2,608	32	1,872	715	656	22,255
1941-45bc	3,648	10,745	4,759	786	3,654	3,701	357	938	2,484
1939 (b) ..	5,128	1,389	1,334	267	695	1,029	200	213	7,663
1940 (b) ..	2,560	8,172	281	1,334	972	1,178	414	159	8,102
1941 (b) ..	617	7,114	889	1,082	2,261	1,802	237	238	3,386
1942 (b) ..	5,121	3,131	3,969	261	523	1,523	312	302	2,930
1943 (b)(c)	978	1,432	1,532	577	1,383	372	906	398	162
1944 (b)(c)	204	204	729	38	69	4	..	..	1,248
1945 (b)(c)	908	728	704	58	464	..	..	..	2,746
1946 (b)(c)	6,586	803	3,149	10	844	77	14	..	9,849
1947 (b)(c)	197	1,412	2,219	683	1,085	3,771	76	146	2,035
1948 ..	7,744	8,679	2,053	1,206	2,375	307	711	40	22,591

(a) Part of New South Wales prior to 1911. (b) Excludes troop movements from September, 1939, to June, 1947. (c) Excludes interstate migration from July, 1943, to June, 1947.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

POPULATION: INCREASE BY NET MIGRATION—*continued.*

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
PERSONS.									
1901-05..	17,237	59,955	1,903	19,479	50,420	2,497	616	(a)	16,793
1906-10..	20,547	9,410	20,071	14,993	2,578	9,807	514	(a)	57,278
1911-15..	87,095	26,619	25,091	1,126	10,839	15,257	1,321	28	136,862
1916-20..	44,444	19,190	6,390	11,783	8,312	2,278	504	4	70,709
1921-25..	60,320	57,203	30,988	21,726	22,081	10,768	227	1,943	183,266
1926-30..	70,850	20,381	15,121	2,571	28,432	7,961	1,148	4,307	129,707
1931-35..	553	3,008	7,320	5,938	4,793	4,028	64	50	10,886
1936-40(b)	22,261	21,505	6,758	7,596	2,469	2,665	3,502	1,832	43,128
1941-45bc	10,262	28,247	11,246	2,988	12,915	8,013	1,246	2,760	7,809
1939 (b) ..	7,899	2,272	3,509	525	215	1,563	1,492	592	13,891
1940 (b) ..	1,102	20,749	73	4,681	3,700	1,972	1,578	397	13,400
1941 (b) ..	1,231	19,495	4,772	2,921	6,578	4,517	669	803	5,184
1942 (b) ..	15,626	6,161	10,749	960	1,113	2,371	1,497	851	6,166
1943 (b)(c)	2,881	4,345	5,203	969	4,275	1,120	2,074	1,106	1,271
1944 (b)(c)	783	441	829	18	107	5	..	..	2,183
1945 (b)(c)	469	1,313	99	94	842	..	..	..	2,629
1946 (b)(c)	9,266	20	4,592	12	1,165	135	2	..	15,148
1947 (b)(c)	4,017	3,854	4,425	2,419	3,363	9,087	128	124	10,611
1948 ..	17,031	20,352	4,348	3,740	5,203	2,176	1,296	69	55,115

(a) Part of New South Wales prior to 1911.
1939, to June, 1947.(b) Excludes troop movements from September,
1939, to June, 1947.

(c) Excludes interstate migration from July, 1943, to June, 1947.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

There was a loss of population by migration in the first five years of the present century; in the next five quinquennial periods there were varying gains which averaged about 115,000 per quinquennium.

In the five years ended 1935 there was a net emigration of 10,886 and in the five years ended 1940 a net immigration of 43,128. During the war period 1941-45 net immigration fell to 7,809 persons. A large net loss by migration of 15,148 persons in 1946 was due mainly to the departure of refugees and evacuees, and also fiancées, wives and children of British and Allied servicemen. With the increasing transport facilities and the resumption of assisted migration, net gains of 10,611 and 55,115 persons were recorded in 1947 and 1948 respectively.

3. **Total Increase.**—The total increase of the population is obtained by the combination of the natural increase with the net migration, and, in the case of the period September, 1939 to June, 1947, with deaths of defence personnel.

The total increment to the population from the beginning of 1861 to the end of 1948 was 6,649,295 while that from 1901-48 was 4,029,541. The annual results for the last ten years are shown below, together with quinquennial figures from 1901 to 1945.

POPULATION: TOTAL INCREASE, 1901 TO 1948.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
MALES.									
1901-05..	66,850	- 3,639	17,123	1,118	36,410	6,184	- 920	(a)	123,126
1906-10..	75,284	48,348	33,706	25,090	11,473	2,919	- 630	(a)	196,190
1911-15..	115,553	47,728	40,534	14,410	12,919	- 213	849	- 12	231,768
1916-20..	95,180	59,593	30,508	24,333	6,005	8,606	- 676	105	223,654
1921-25..	116,520	87,014	47,775	30,965	25,659	2,913	- 51	1,236	312,031
1926-30..	109,954	51,605	37,229	12,353	30,314	3,333	739	2,434	247,961
1931-35..	50,277	18,318	26,789	5,049	5,871	4,619	- 109	502	111,316
1936-40(b)	57,601	36,297	28,364	4,218	9,995	5,526	2,847	2,622	147,470
1941-45bc	62,389	47,747	20,117	14,703	2,856	2,204	915	427	151,358
1939 (b) ..	12,304	5,436	6,774	1,608	2,122	767	1,295	811	31,117
1940 (b) ..	8,939	17,567	4,674	- 1,327	- 331	456	1,201	669	31,848
1941 (b) ..	8,212	17,582	1,167	3,760	- 1,892	- 1,497	927	- 123	28,136
1942 (b) ..	17,230	6,110	- 3,112	1,866	- 26	287	- 1,208	- 92	21,055
1943 (b)(c)	8,438	8,820	7,971	2,144	- 427	627	1,160	- 273	28,460
1944 (b)(c)	13,374	7,340	6,110	3,198	2,912	1,226	19	457	34,636
1945 (b)(c)	15,135	7,895	7,981	3,735	2,289	1,561	17	458	39,071
1946 (b)(c)	15,958	11,611	6,184	4,650	3,720	2,153	11	536	44,823
1947(b)(c)	23,706	10,555	6,467	6,817	6,379	7,667	140	451	62,182
1948 ..	27,640	23,090	10,550	7,003	6,695	4,612	662	328	81,180

FEMALES.

1901-05..	60,729	17,847	20,512	4,253	33,761	7,301	109	(a)	144,512
1906-10..	80,687	42,639	33,828	19,157	15,221	4,499	- 115	(a)	195,916
1911-15..	135,686	75,309	45,517	24,707	26,912	3,946	333	196	312,606
1916-20..	103,093	43,871	35,049	20,688	8,655	6,610	182	38	218,186
1921-25..	114,098	69,128	46,443	25,077	20,545	3,699	- 117	826	279,699
1926-30..	114,059	56,949	34,665	15,066	23,769	2,600	404	2,251	249,763
1931-35..	61,442	30,672	27,772	7,246	12,142	3,507	275	539	143,595
1936-40(b)	75,275	37,026	31,791	8,076	14,458	5,053	907	1,778	174,454
1941-45bc	79,661	52,442	33,295	17,123	13,156	4,074	657	845	201,253
1939 (b) ..	16,920	6,598	7,798	1,863	3,574	370	262	501	37,886
1940 (b) ..	15,594	14,218	6,683	1,070	2,027	290	486	458	40,826
1941 (b) ..	13,806	13,925	5,852	3,550	1,020	- 370	- 132	126	37,876
1942 (b) ..	17,854	10,023	2,566	2,746	3,468	15	- 270	41	36,443
1943 (b)(c)	14,133	10,238	8,688	2,905	2,036	1,189	954	- 41	40,102
1944 (b)(c)	16,954	8,998	7,561	3,805	3,599	1,410	53	350	42,730
1945 (b)(c)	16,824	9,258	8,628	4,117	3,024	1,830	52	369	44,102
1946 (b)(c)	13,436	13,051	5,783	4,886	3,165	2,137	85	418	42,961
1947(b)(c)	21,484	11,365	7,523	5,830	5,529	6,278	200	247	58,405
1948 ..	27,122	20,936	11,194	5,859	6,754	2,015	841	351	75,072

(a) Part of New South Wales prior to 1911. (b) Includes recorded deaths of defence personnel whether inside or outside Australia from September, 1939, to June, 1947. (c) Excludes interstate migration from July, 1943, to June, 1947.

NOTE.—Minus sign (—) denotes decrease.

POPULATION: TOTAL INCREASE, 1901 TO 1948—*continued*.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Australia.
PERSONS.									
1901-05..	127,579	14,208	37,635	5,371	70,171	13,485	— 811	(a)	267,638
1906-10..	155,971	90,987	67,534	44,247	26,694	7,418	— 745	(a)	392,106
1911-15..	251,239	123,037	86,051	39,117	39,831	3,733	1,182	184	544,374
1916-20..	198,273	103,464	65,557	45,021	14,660	15,216	— 494	143	441,840
1921-25..	230,618	156,142	94,218	56,042	46,204	6,612	— 168	2,062	591,730
1926-30..	224,013	108,554	71,894	27,419	54,083	5,933	1,143	4,685	497,724
1931-35..	111,719	48,990	54,561	12,295	18,013	8,126	166	1,041	254,911
1936-40(b)	132,876	73,323	60,155	12,294	24,453	10,579	3,844	4,400	321,924
1941-45bc	142,050	100,189	53,412	31,826	16,012	6,278	1,572	1,272	352,611
1939 (b)..	20,224	12,034	14,572	3,471	5,696	1,137	1,557	1,312	69,003
1940 (b)..	24,533	31,785	11,357	— 257	1,606	746	1,687	1,127	72,674
1941 (b)..	22,108	31,507	7,019	7,310	— 863	— 1,867	795	3	66,012
1942 (b)..	35,084	16,133	— 546	4,612	3,442	302	— 1,478	51	57,498
1943 (b)(c)	22,571	19,058	16,659	5,449	1,609	1,816	2,114	— 314	68,562
1944 (b)(c)	30,328	16,338	13,671	7,003	6,511	2,636	72	807	77,366
1945 (b)(c)	31,959	17,153	16,609	7,852	5,313	3,391	69	827	83,173
1946 (b)(c)	29,394	24,662	11,967	9,536	6,885	4,290	96	954	87,784
1947(b)(c)	45,190	21,920	13,990	12,647	11,908	13,945	349	668	120,647
1948 ..	54,762	44,626	21,744	12,862	13,449	6,627	1,503	679	156,252

(a) Part of New South Wales prior to 1911. (b) Includes recorded deaths of defence personnel whether inside or outside Australia, from September, 1939, to June, 1947. (c) Excludes interstate migration from July, 1943, to June, 1947.

NOTE.—Minus sign (—) denotes decrease.

Differences between the figures above and totals of figures for natural increase and net migration shown in preceding tables represent, after taking into account deaths of defence personnel, unrecorded movement of population during the intercensal period July, 1933, to June, 1947, as disclosed by the final results of the 1947 Census. Particulars of total increase have been adjusted for this discrepancy but no separate adjustment has been applied to individual elements of increase. Intercensal discrepancies disclosed by previous Censuses were adjusted on recorded oversea departures.

4. **Percentage Rates of Increase.**—(i) *Australia.* The annual percentage rates of increase of population in Australia during each of the years 1940 to 1948 were as follows:—1940, 1.04; 1941, 0.93; 1942, 0.80; 1943, 0.95; 1944, 1.06; 1945, 1.13; 1946, 1.18; 1947, 1.60; 1948, 2.05. These rates are based on population estimates adjusted in accordance with the final results of the 1947 Census.

(ii) *Various Countries.* The table hereunder gives approximate percentage rates of increase of the population of Australia and its component States, in comparison with those for other countries:—

POPULATION: PERCENTAGE RATES OF INCREASE IN VARIOUS COUNTRIES.

State or Country.	Annual Percentage Rate of Increase of Population during quinquennial periods—								
	1901-06.	1906-11.	1911-16.	1916-21.	1921-26.	1926-31.	1931-36.	1936-41.	1941-46.
AUSTRALASIA—									
Australia ..	1.38	2.04	1.87	2.07	2.11	1.50	0.76 <i>a</i>	0.96 <i>a</i>	0.98 <i>a</i>
New South Wales(b) ..	1.99	2.05	2.61	2.19	2.20	1.74	0.87 <i>a</i>	1.00 <i>a</i>	1.03 <i>a</i>
Victoria ..	0.17	1.70	1.38	1.68	2.00	1.18	0.50 <i>a</i>	0.94 <i>a</i>	0.93 <i>a</i>
Queensland ..	1.35	2.77	2.18	2.17	2.38	1.53	1.15 <i>a</i>	1.13 <i>a</i>	0.97 <i>a</i>
South Australia(c) ..	0.27	2.48	1.47	2.33	2.17	0.81	0.42 <i>a</i>	0.58 <i>a</i>	1.12 <i>a</i>
Western Australia ..	6.22	2.42	1.77	1.31	2.66	2.56	0.92 <i>a</i>	0.97 <i>a</i>	0.74 <i>a</i>
Tasmania ..	1.33	0.03	0.43	1.90	0.04	1.01	0.54 <i>a</i>	0.82 <i>a</i>	1.01 <i>a</i>
New Zealand ..	2.81	2.43	1.50	2.13	2.06	1.38	0.79	0.58 <i>d</i>	1.81
EUROPE—									
England and Wales ..	1.04	1.02	-0.84	1.81	0.64	0.44	0.42	0.44	0.45
Scotland ..	0.55	0.56	0.31	0.24	0.09	-0.21	0.50	0.61	0.03
Ireland ..	-0.22	-0.06	-0.21	0.58	-0.60	-0.12	0.28	0.18	-0.20
Belgium ..	1.26	0.09	0.53	-0.55	1.03	0.71	0.42	-0.10	0.22
Denmark ..	1.12	1.26	1.20	2.13	1.01	0.67	0.84	0.74	1.20
France ..	0.15	0.06	-0.72	0.55	0.76	0.53	0.02	-1.48	0.51
Germany ..	1.46	1.33	0.71	-1.60	0.37	0.55	0.58	(e)	(e)
Italy ..	0.52	0.80	1.16	0.22	0.91	0.31	0.63	0.55 <i>f</i>	0.49 <i>f</i>
Netherlands ..	1.53	1.22	1.72	1.16	1.53	1.06	1.26	1.12	1.00
Norway ..	0.51	0.73	1.10	1.14	0.65	0.42	0.46	0.52	0.90
Spain ..	0.51	0.87	0.66	0.81	0.95	0.80	1.40	0.91	0.91
Sweden ..	0.61	0.84	0.70	0.64	0.40	0.20	0.34	0.45	1.01
Switzerland ..	1.28	1.17	0.81	0.01	0.38	0.62	0.44	0.43	0.98
ASIA—									
Ceylon ..	1.62	1.20	1.71	1.28	2.30	1.18	1.34	1.40	2.15
Japan ..	1.29	1.08	1.42	0.37	1.42	1.48	0.77	1.06	0.92
AMERICA—									
Canada ..	2.99	2.99	2.20	1.81	1.33	1.97	1.23	0.85	1.35
United States ..	2.00	1.32	1.67	1.21	1.67	1.27	0.69	0.79	1.18

(a) Based on populations revised in accordance with the final results of the 1947 Census.
 (b) Includes Australian Capital Territory. (c) Includes Northern Territory. (d) Excludes armed forces overseas at 31st December, 1941. (e) Not available. (f) Excludes war losses.
 (g) Territory defined by 1947 peace treaty.

NOTE.—Minus sign (—) denotes decrease.

(iii) *Variations in the Rates.* The annual rate of increase of the population during the present century has averaged 1.53 per cent., but the results from year to year have deviated widely from this figure. In the following table the period 31st December, 1900, to 31st December, 1948, has been arranged into certain defined groups of years according to the occurrence of influences seriously affecting the growth of population:—

POPULATION: PERIODICAL PERCENTAGE RATES OF INCREASE.

Period from 31st December—	Interval.	Increase during Period.	Average Annual Increase.	Average Annual Percentage Rate of Increase.		
				Natural Increase.	Net Migration.	Total.
	Years.	Million.	Thousand.			
1900 to 1913 ..	13	1.13	87	1.59	0.53	2.04
1913 to 1923 ..	10	0.86	86	1.50	0.15	1.64
1923 to 1929 ..	6	0.68	113	1.28	0.64	1.88
1929 to 1939 (a) ..	10	0.57	57	0.82	0.02	0.85
1939 to 1945 (a) ..	6	0.43	71	0.92	0.05	0.99
1945 to 1948 (a) ..	3	0.36	122	1.38	0.23	1.61

(a) Based on population revised in accordance with the final results of the 1947 Census. The figures include Australian defence forces overseas from September, 1939, to June, 1947.

Up to 1913 the rate of natural increase was rising, and this factor, coupled with the impetus given to immigration from 1911 onwards, was responsible for the comparatively high annual rate of 2.04 per cent. during this period. The 1914-18 War was a dominating influence in the decade 1914-23, and its effects can be seen in the reduction of the rate from 2.04 to 1.64 per cent. In the next span 1924-29 a more settled and prosperous era was experienced; migration was resumed on a large scale and, despite a further decline in the rate of natural increase owing to the persistent fall in the birth-rate, the annual rate of growth rose to 1.88 per cent. After 1929 came the economic depression, and immigration ceased—in fact Australia actually lost people through an excess of departures over arrivals in 1930, 1931, 1932 and 1935. The rate of natural increase also fell, and the rate of growth of the population receded to 0.85 per cent. per annum. With the outbreak of war in 1939, Australia entered a new phase in her demographic history, the full effects of which will not be seen for some time to come. The immediate effect of the war was to increase the number of marriages and to reverse the downward trend in fertility. The number of births increased each war year from 1940 to 1945 and these increases more than offset the rise in deaths due to war casualties and higher civilian death rates. As might be expected, migration over these years was negligible. The post-war period 1946 to 1948 was marked by a continued high natural increase and a resumption of immigration, the latter resulting in a substantial net gain of 55,115 persons in 1948. The annual rate of growth for the period was 1.61 per cent.

If the population increased at the average rate of the present century, namely, 1.53 per cent. per annum, it would double itself in 46 years. It has been estimated, on the assumptions that the 1932-34 birth and death rates remain unchanged and that no increment to the population results from migration, that the average annual rates of natural increase would be for the period 1933-53, 0.64 per cent.; 1933-63, 0.55 per cent. and 1933-73, 0.46 per cent. In this respect the experience in Australia would be very similar to that of many other countries as the result of the low birth-rate.

Rates of increase from 1860 to 1948 may be found for each State and Territory of Australia in *Demography Bulletin*, No. 66, 1948.

§ 5. Density.

1. *General.*—From certain aspects population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,974,581 square miles, and an estimated population on 31st December, 1948, of 7,794,880, excluding about 47,000 full-blood aboriginals, has a density of only 2.62 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents and sub-continents the densities are approximately as follows:—Europe (excluding U.S.S.R.), 201; Asia (excluding U.S.S.R.), 119; U.S.S.R., 22; Africa, 16; North and Central America, 24; and South America, 15. The population of Australia has thus about one-sixth of the density of South America and of Africa; about one-eighth of that of U.S.S.R.; about one-ninth of that of North and Central America; about one-forty-fifth of that of Asia (excluding U.S.S.R.); and about one-seventy-fifth of that of Europe (excluding U.S.S.R.).

On account of the very large area of Australia and the unsuitability for settlement of much of the country, the density of population must necessarily increase slowly. In Australia as a whole the figure has increased from 1.29 per square mile in 1901 to 2.62 in 1948. Victoria's density, however, has grown from 13.77 to 23.97 and that of New South Wales from 4.43 to 9.90 in the same period.

A map showing the density of population throughout Australia at the 1947 Census appears on pages 535-6 of this chapter. When comparing the density of population of the several States consideration should be given to the average annual rainfall distribution in each State as an indication of the climatic influence upon probable population numbers. The area of New South Wales receiving less than 10 inches of rainfall is 20 per cent.; Victoria, nil; Queensland, 13 per cent.; South Australia, 83 per cent.; Western Australia, 58 per cent.; Tasmania, nil; and Australia, 38 per cent.

Particulars concerning the number and density of the population of the most important countries of the world at 30th June, 1947, are given in the following table. In some instances, more particularly in the cases of Asia and Africa, the numbers must be considered as rough approximations only.

**POPULATION OF THE MAIN COUNTRIES OF THE WORLD :
NUMBER AND DENSITY, 1947.**

Country.	Population. (^{'000}).	Density. (a)	Country.	Population. (^{'000}).	Density. (a)
EUROPE.			AFRICA.		
Germany ..	67,300	489.1	Nigeria ..	23,745	70.1
United Kingdom ..	49,539	525.8	Egypt ..	19,170	49.7
Italy ..	45,373	390.4	French West Africa ..	15,996	8.9
France ..	41,000	192.7	Ethiopia ..	15,000	(c)
Spain ..	27,503	141.6	Union of South Africa ..	11,605	24.6
Poland ..	23,781	197.6	Belgian Congo ..	10,753	11.9
Rumania ..	16,530	180.3	Algeria ..	8,488	10.0
Yugoslavia ..	15,324	158.8	French Morocco ..	8,225	50.9
Czechoslovakia ..	12,164	246.5	Anglo-Egyptian Sudan ..	7,919	8.2
Netherlands ..	9,629	739.3	Mozambique ..	6,116	20.5
Hungary ..	9,093	253.2	Tanganyika Territory ..	5,650	15.6
Belgium ..	8,421	714.9	Other ..	53,050	..
Portugal ..	8,312	234.7	Total Africa ..	187,726	16.2
Greece (b) ..	7,665	149.8			
Bulgaria ..	7,048	164.7	NORTH AND CENTRAL AMERICA.		
Austria ..	6,920	185.2	United States of America ..	144,034	47.7
Sweden ..	6,803	39.2	Mexico ..	23,434	30.8
Switzerland ..	4,547	285.2	Canada ..	12,582	3.4
Denmark ..	4,146	250.1	Cuba ..	5,091	115.1
Finland ..	3,895	29.9	Other ..	21,269	..
Norway ..	3,144	25.1	Total North and Central America ..	206,410	23.8
Eire ..	2,972	109.5			
Other ..	2,412	..	SOUTH AMERICA.		
Total Europe ..	383,521	200.5	Brazil ..	47,550	14.5
			Argentina ..	16,109	14.9
ASIA.			Columbia ..	10,545	24.0
China ..	463,198	123.2	Peru ..	7,922	16.4
India ..	338,727	(e)	Chile ..	5,526	19.3
Japan ..	78,000	548.1	Other ..	15,907	..
Netherlands Indies(d) ..	76,360	103.9	Total South America ..	103,559	15.0
Pakistan ..	72,206	200.0			
Korea ..	27,700	324.9	OCEANIA, ETC.		
French Indo-China ..	27,030	99.2	Australia(g) ..	7,626	2.6
Philippine Islands ..	19,511	168.8	New Zealand and Dependencies ..	1,802	17.4
Turkey (e) ..	19,250	65.0	Territory of New Guinea ..	900	9.7
Siam ..	17,351	87.5	Hawaii ..	544	84.6
Burma ..	17,000	65.0	Papua ..	300	3.3
Iran ..	17,000	(e)	Fiji ..	265	37.4
Afghanistan ..	12,000	(e)	Other ..	518	..
Yemen ..	7,000	103.6	Total Oceania, etc. ..	11,955	3.6
Ceylon ..	6,879	271.6			
Nepal ..	6,450	119.3	SUMMARY.		
Saudi Arabia ..	6,000	(e)	Europe ..	383,521	200.5
Other ..	27,903	..	Asia ..	1,239,565	118.7
Total Asia ..	1,239,565	118.7	U.S.S.R. ..	103,000	22.4
			Africa ..	187,726	16.2
			America, North and Central ..	206,410	23.8
			America, South ..	103,559	15.0
			Oceania, etc. ..	11,955	3.6
U.S.S.R. (Europe and Asia) (f) ..	193,000	22.4	Total ..	2,325,736	45.3

(a) Number of persons per square mile. (b) Includes Dodecanese Islands. (c) Not available.
 (d) Includes Dutch New Guinea. (e) Includes European Territory. (f) Population 1946.
 (g) Includes 47,000 full-blood aboriginals.

2. Position of the British Commonwealth.—The approximate relationship of the British Commonwealth to the world as a whole in regard to its area and population is given hereunder :—

AREA AND POPULATION : BRITISH COMMONWEALTH AND WORLD, 1947.(a)

Particulars.	The World.	British Commonwealth.
Area in square miles (excluding Polar Circles) ..	51,379,000	13,253,000
Population ..	2,325,736,000	597,696,000
Population per square mile ..	45.3	45.1

(a) *Demographic Year Book*, United Nations, 1948, and *The Statesman's Year Book*, 1947.

§ 6. General Characteristics.

1. Sex Distribution.—(i) *States.* The number of males to each hundred females has been adopted as a measure of the “masculinity” of the population. On pp. 163–5 in the second issue of the Official Year Book a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In the fifth issue, on p. 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the 1911 Census.

With the exception of some dislocation arising from the two World Wars there has been a continuous diminution of the masculinity of the population. In 1900, the masculinity was 110.55; in 1910, 107.87 and in 1920, 103.47. After 1921, however, the masculinity tended to rise until 1927 (104.54), since when it gradually fell to 100.41 in 1946 but rose slightly to 100.65 over the following two years.

A reduction in the masculinity of a population may be expected where persons in the higher age-groups constitute an increasing proportion of the total population. This is a direct consequence of the greater longevity of females. A falling birth-rate tends to reduce masculinity while a rising birth-rate tends to increase it.

The following table shows the masculinity of the population at quinquennial intervals from 1901 to 1940 and for each year from 1943 onwards:—

POPULATION : MASCULINITY, 1901 TO 1948.

(NUMBER OF MALES PER 100 FEMALES.)

As at 31st December—	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
1901	110.12	101.16	125.78	102.71	155.69	107.90	593.32	(a)	110.15
1905	111.05	97.60	121.75	101.65	141.35	106.09	496.76	(a)	108.65
1910	109.23	98.71	119.02	103.12	132.90	104.14	486.32	(a)	107.87
1915	105.66	95.07	114.74	98.26	117.23	99.77	400.33	109.75	103.55
1920	104.31	97.38	112.00	99.83	114.55	101.67	270.04	116.70	103.47
1925	104.09	99.71	110.94	102.02	115.76	100.90	297.61	132.37	104.23
1930	103.39	99.14	110.66	100.97	117.17	101.53	263.66	118.60	103.85
1935 (b) ..	102.38	97.84	109.81	100.20	113.21	102.45	212.80	115.64	102.71
1940 (b) ..	100.68	97.85	108.48	98.91	110.38	102.74	240.31	124.62	101.81
1943 (b) ..	100.11	97.75	106.04	98.48	106.26	101.55	220.28	114.59	100.74
1944 (b) ..	99.87	97.61	105.67	98.31	105.87	101.38	223.16	115.41	100.51
1945 (b) ..	99.75	97.50	105.45	98.21	105.49	101.15	220.16	115.86	100.36
1946 (b) ..	99.93	97.39	105.47	98.16	105.65	101.14	214.95	116.55	100.41
1947 (b) ..	100.07	97.34	105.20	98.49	105.86	102.13	206.33	118.63	100.50
1948	100.11	97.65	104.98	98.86	105.69	104.03	182.10	117.55	100.65

(a) Part of New South Wales prior to 1911.
of the 1947 Census.

(b) Revised in accordance with the final results

(ii) *Various Countries.* The difference between young and old countries in the masculinity of their population is clearly illustrated by the comparisons furnished in the following table.

POPULATION : MASCULINITY IN VARIOUS COUNTRIES.

Country.	Year.	Number of Males to each 100 Females.	Country.	Year.	Number of Males to each 100 Females.
Canada	1938	106.5	Belgium	1945	96.0
Eire	1946	102.4	Hungary	1941	95.9
Union of South Africa(a)	1946	101.2	Northern Ireland ..	1946	95.5
Australia(b) ..	1948	100.6	U.S.S.R. (Russia) ..	1939	94.8
New Zealand(c) ..	1948	100.4	Italy	1936	94.3
Japan	1940	100.0	England and Wales ..	1948	94.1
United States of America	1946	99.5	Spain	1947	93.2
Netherlands	1947	99.2	Scotland	1946	93.2
Sweden	1946	99.1	France	1939	93.0
Denmark	1939	97.4	Poland	1946	84.4
Norway	1939	96.3	Germany	1946	79.9

(a) White population only.

(b) Excludes full-blood aboriginals.

(c) Excludes Maoris.

2. **Age Distribution.**—The age distribution of the population is obtained only at a Census. The following table shows the variation which took place in the age constitution of the population during the 14 years following the 1933 Census.

Of the 7,579,358 persons enumerated at the 1947 Census, 10.0 per cent. were under 5 years of age; 8.0 per cent. were 5 years of age and under 10 years; 7.1 per cent. from 10 to 14 years; 7.7 per cent. 15 to 19 years; and 34.4 per cent. were under age 21. At the 1933 Census 8.6 per cent. were under 5 years; 9.5 per cent. 5 to 9 years; 9.4 per cent. 10 to 14 years; 9.3 per cent. 15 to 19 years; and 38.6 per cent. under 21 years of age.

Owing mainly to the fall in the birth-rate, the number of young people in Australia between the ages of 5 to 19 years in 1947 shows a serious decline of 142,680 compared with the number in this age-group in 1933. The corresponding increase in this age-group from 1921 to 1933 was 277,154 persons. Although the decrease in the 5 to 19 years age-group in 1947 is offset by an increase of 191,422 persons in the age-group 0 to 4 years, the proportion of persons under 21 years of age in Australia has decreased from 38.6 per cent. in 1933 to 34.4 per cent. in 1947 whilst the proportion of persons aged 21 years and over has increased from 61.4 per cent. to 65.6 per cent. over the same period.

POPULATION: ADJUSTED AGE DISTRIBUTION(a), AUSTRALIA, 1933 AND 1947.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Age last Birthday. (Years.)	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
0-4.. ..	290,461	278,504	568,965	388,301	372,086	760,387	191,422
5-9.. ..	318,937	308,443	627,380	307,697	296,286	603,983	-23,397
10-14.. ..	317,526	307,656	625,222	271,761	262,922	534,683	-90,539
15-19.. ..	311,792	303,618	615,410	297,524	289,142	586,666	-28,744
20-24.. ..	298,001	286,617	584,618	309,490	308,464	617,954	33,336
25-29.. ..	277,462	256,508	533,970	297,497	300,889	598,386	64,416
30-34.. ..	251,515	237,664	489,179	297,531	300,567	598,098	108,919
35-39.. ..	228,660	237,493	466,153	285,309	275,637	560,946	94,793
40-44.. ..	229,822	226,469	456,291	258,008	238,284	496,292	40,001
45-49.. ..	209,325	199,388	408,713	236,381	229,347	465,728	57,015
50-54.. ..	171,888	162,774	334,462	207,515	217,473	424,988	90,526
55-59.. ..	133,314	128,857	262,171	198,928	198,521	397,449	136,278
60-64.. ..	114,859	113,746	228,605	159,157	164,552	323,709	95,104
65-69.. ..	92,946	90,499	183,445	116,511	126,863	243,374	59,929
70-74.. ..	66,018	64,282	130,300	76,919	90,481	167,400	37,100
75-79.. ..	35,920	36,255	72,175	50,914	61,079	111,993	39,818
80-84.. ..	13,862	15,736	29,598	26,218	32,696	58,914	29,316
85-89.. ..	4,640	6,234	10,874	9,627	13,301	22,928	12,054
90-94.. ..	1,148	1,607	2,755	1,815	2,938	4,753	1,998
95-99.. ..	184	306	490	252	439	691	201
100 and over	31	32	63	15	21	36	-27
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519
Under 21 years..	1,300,183	1,257,814	2,557,997	1,324,623	1,280,353	2,604,976	46,961
21 years and over	2,066,928	2,004,914	4,071,842	2,472,747	2,501,635	4,974,382	902,538
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(a) Unspecified ages have been distributed over the population aged 15 years and upwards.

NOTE.—Minus sign (—) denotes decrease.

The next table shows the change which has been taking place in the age constitution of the population of Australia since 1871. Each successive Census except 1921 has revealed a larger percentage of the population 15 years of age and over than was recorded at the previous Census.

POPULATION : AGE DISTRIBUTION, AUSTRALIA, 1871 TO 1947.
(Per cent.)

Census Year.	Males.				Females.				Persons.			
	Under 15 years.	15 and under 65.	65 and over.	Total.	Under 15 years.	15 and under 65.	65 and over.	Total.	Under 15 years.	15 and under 65.	65 and over.	Total.
1871	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881	36.36	60.81	2.83	100	41.86	56.03	2.11	100	38.89	58.61	2.50	100
1891	34.80	62.01	3.19	100	39.38	58.09	2.53	100	36.92	60.19	2.89	100
1901	33.89	61.80	4.31	100	36.51	59.88	3.61	100	35.14	60.88	3.98	100
1911	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921	31.64	63.88	4.48	100	31.79	63.83	4.38	100	31.71	63.86	4.43	100
1933	27.53	66.09	6.38	100	27.42	65.99	6.59	100	27.48	66.04	6.48	100
1947	25.48	67.08	7.44	100	24.63	66.71	8.66	100	25.05	66.90	8.05	100

3. **Conjugal Condition.**—Of the total population of Australia at the 1947 Census, 47.3 per cent. had never married; 46.4 per cent. were married; 5.6 per cent. widowed; and 0.7 per cent. divorced. Since the 1933 Census the number never married had decreased by 2.4 per cent.; those married increased by 35.2 per cent.; the widowed by 28.4 per cent.; and the divorced by 148 per cent.

From a demographic point of view the most important change in the conjugal condition of the population of Australia since 1933 was the decrease in the number of persons who had never married and the relative increase in the number of married persons. In 1947, 62.0 per cent. of all persons 15 years of age and over, who stated their conjugal condition, were married, compared with 54.2 per cent. in 1933. If the latter percentage had obtained in 1947 there would have been approximately 440,000 fewer married persons at 30th June, 1947.

The number of widowed females recorded in Australia in 1947 was 309,383, or nearly three times as many as the number of widowed males. This disparity is the result of two influences. The first is the greater longevity of females coupled with the usually younger age at marriage; and the second is that a larger proportion of males cancel their widowhood by remarriage.

The number of divorced persons increased by 31,280 between 1933 and 1947 compared with an increase of 12,585 between 1921 and 1933. The numbers of divorced males and females at 30th June, 1933 in this table differ slightly from those shown on page 288 where the conjugal conditions of those for whom particulars were not given at the Census have been distributed proportionately among the various groups.

POPULATION : CONJUGAL CONDITION, AUSTRALIA, 1933 AND 1947.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Conjugal Condition.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Never Married—							
Under 15 years of age ..	926,924	894,643	1,821,567	967,759	931,294	1,899,053	77,486
15 years of age and over	1,018,587	825,448	1,844,035	929,212	748,414	1,677,626	-166,409
Total	1,945,511	1,720,091	3,665,602	1,896,971	1,679,708	3,576,679	-88,923
Married(a)	1,299,693	1,293,922	2,593,615	1,751,635	1,754,775	3,506,410	912,795
Widowed	97,775	230,180	327,955	111,680	309,383	421,063	93,108
Divorced	10,251	10,862	21,113	24,952	27,441	52,393	31,280
Not Stated	13,881	7,673	21,554	12,132	10,681	22,813	1,259
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(a) Includes persons permanently separated (legally or otherwise).

NOTE.—Minus sign (—) denotes decrease.

4. **Dependent Children under 16 years of age.**—At the 1947 Census 927,453 males and 66,418 females stated they had children under 16 years of age dependent on them at 30th June, 1947, the total number of dependent children under age 16 claimed being 1,962,791, of whom 1,853,314 or 94.4 per cent. were dependent on males and 109,477 or 5.6 per cent. were dependent on females. This represented an average of 2.00 for each male with dependent children and 1.65 for each female with dependent children.

Forty-three per cent. of the males with dependent children under 16 years of age had one dependent child; 31 per cent. two children; 15 per cent. three children; 6 per cent. four children; 3 per cent. five children; and 2 per cent. more than five children. Of the females with dependent children under 16 years of age, 60 per cent. had one dependent child; 25 per cent. two children; 9 per cent. three children; 4 per cent. four children; 1 per cent. five children; and 1 per cent. more than five children.

Compared with 1933, the number of children dependent on persons with one, two or three dependent children increased by 234,521, but this increase was largely offset by decreases in the number of children dependent on persons with four or more dependent children. Although persons with dependent children increased by 127,759, the number of children under 16 years dependent on such persons increased by only 42,932.

POPULATION : PERSONS WITH DEPENDENT CHILDREN UNDER SIXTEEN YEARS OF AGE, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Number of Dependent Children.	Census, 30th June, 1933.				Census, 30th June, 1947.				Increase, 1933-47.	
	Number of Persons with Dependent Children.			Total Number of Depend- ent Children.	Number of Persons with Dependent Children.			Total Number of Depend- ent Children.	Persons.	Depend- ent Children.
	Males.	Fe- males.	Per- sons.		Males.	Fe- males.	Per- sons.			
1	306,695	34,823	341,518	341,518	401,464	39,683	441,147	441,147	99,629	99,629
2	233,167	14,631	247,798	495,596	291,739	16,482	308,221	616,442	60,423	120,846
3	131,646	6,724	138,370	415,110	136,819	6,233	143,052	429,156	4,682	14,046
4	69,485	3,067	72,552	290,208	57,036	2,578	59,614	238,456	- 12,938	- 51,752
5	34,676	1,337	36,013	180,065	23,223	1,036	24,259	121,295	- 11,754	- 58,770
6	17,276	557	17,827	106,962	10,395	263	10,658	63,948	- 7,169	- 43,014
7	7,497	185	7,682	53,774	4,114	96	4,210	29,470	- 3,472	- 24,304
8	2,931	75	3,006	24,048	1,753	35	1,788	14,304	- 1,218	- 9,744
9	964	15	979	8,811	697	11	708	6,372	- 271	- 2,139
10	281	3	284	2,840	167	1	168	1,680	- 116	- 1,160
11	69	..	69	759	37	..	37	407	- 32	- 352
12	14	..	14	168	4	..	4	48	- 10	- 120
13	..	..	..	..	4	..	4	52	4	52
14	..	..	..	..	1	..	1	14	1	14
Total	804,695	61,417	866,112	1,919,859	927,453	66,418	993,871	1,962,791	127,759	42,932

NOTE.—Minus sign (—) denotes decrease.

5. **Birthplace.**—At 30th June, 1947, the Australian-born element of the population of Australia represented 90.2 per cent. as compared with 86.4 per cent. at the 1933 Census. The number of Australian-born increased by 1,108,605 or by 19.4 per cent. since 1933.

On the other hand the overseas-born population declined during the same period by 159,086 or by 17.6 per cent. The principal contribution to the decline of the overseas-born population was the decrease of approximately 171,000 in the number of persons born in the British Isles.

There was little change during the intercensal period in the number of persons of Asiatic, African or American birthplace, but persons born in these continents form a very small percentage of the population of Australia.

Of persons born outside Australia, 56 per cent. were males and 44 per cent. females.

POPULATION : BIRTHPLACES, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Birthplace.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Australia	2,848,282	2,878,284	5,726,566	3,380,324	3,454,847	6,835,171	1,108,605
New Zealand	23,837	22,126	45,963	21,890	21,720	43,610	- 2,353
Other Australasian ..	468	306	774	776	810	1,586	812
Total, Australasia ..	2,872,587	2,900,716	5,773,303	3,402,990	3,477,377	6,880,367	1,107,064
England	268,849	217,982	486,831	205,330	176,262	381,592	- 105,239
Wales	8,492	5,994	14,486	6,859	5,005	11,864	- 2,622
Scotland	73,488	59,001	132,489	55,734	47,264	102,998	- 29,491
Ireland	41,576	37,076	78,652	23,943	20,870	44,813	- 33,839
Germany	10,826	6,016	16,842	8,955	5,612	14,567	- 2,275
Greece	6,548	1,789	8,337	9,115	3,176	12,291	3,954
Italy	20,064	6,692	26,756	22,506	11,126	33,632	6,876
Other European	31,270	11,695	42,965	33,003	16,846	49,849	6,884
Total, Europe	461,113	346,245	807,358	365,445	286,161	651,606	- 155,752
British India and Ceylon ..	4,955	2,457	7,412	5,247	2,913	8,160	748
China	8,072	507	8,579	5,135	1,269	6,404	- 2,175
Other Asiatic	6,405	2,384	8,849	5,708	3,824	9,532	683
Total, Asia	19,492	5,348	24,840	16,090	8,006	24,096	- 744
Union of South Africa ..	3,271	2,908	6,179	3,071	2,795	5,866	- 313
Other African	926	716	1,642	906	765	1,671	29
Total, Africa	4,197	3,624	7,821	3,977	3,560	7,537	- 284
Canada	2,621	1,299	3,920	2,300	1,709	4,009	89
United States of America ..	3,569	2,497	6,066	3,794	2,438	6,232	166
Other American	965	628	1,593	783	606	1,389	- 204
Total, America	7,155	4,424	11,579	6,877	4,753	11,630	51
Polynesia	1,582	1,305	2,887	1,526	1,619	3,145	258
At Sea	985	1,066	2,051	465	512	977	- 1,074
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

NOTE.—Minus sign (—) denotes decrease.

6. **Period of Residence in Australia.**—The decline, until recently, in immigration into Australia is reflected in the figures in this table, which classifies the immigrant population of Australia according to period of residence in Australia. They show that, of persons born outside Australia who stated their period of residence, 5.7 per cent. had resided in Australia for a period of less than 5 years, 11.2 per cent. for less than 10 years, and 14.8 per cent. for less than 15 years, compared with 5.7, 25.5 and 39.5 per cent. respectively at the previous Census in 1933.

IMMIGRANT POPULATION : PERIOD OF RESIDENCE, AUSTRALIA, 1933 AND 1947.

PERSONS BORN OUTSIDE AUSTRALIA.

Number of Completed Years of Residence.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
0	7,407	2,783	10,190	16,660	9,953	26,613	16,423
1	2,133	1,856	3,989	4,116	4,953	9,069	5,080
2	2,243	2,277	4,520	2,124	1,322	3,446	- 1,074
3	5,683	5,411	11,094	822	462	1,284	- 9,810
4	10,761	9,121	19,882	671	319	990	- 18,892
5-9	28,227	21,448	49,675	24,393	17,009	41,402	- 8,273
10-14 ..	104,664	68,661	173,325	22,435	17,066	39,501	- 133,824
15-19 ..	66,084	56,685	122,769	13,507	12,769	26,276	- 96,493
20-24 ..	26,987	26,098	53,085	28,647	25,605	54,252	1,167
25-29 ..	113,060	77,714	190,774	92,599	60,211	152,810	- 37,964
30-34 ..	23,203	10,938	34,141	43,338	41,432	84,770	50,629
35-39 ..	16,473	8,331	24,804	41,394	39,367	80,761	55,957
40-44 ..	11,187	6,304	17,491	74,005	47,568	121,573	104,082
45-49 ..	22,110	17,196	39,306	14,111	7,327	21,438	- 17,868
50-54 ..	36,670	28,297	64,967	8,822	5,424	14,246	- 50,721
55-59 ..	27,147	20,486	47,633	6,518	5,543	12,061	- 35,572
60-64 ..	11,412	9,432	20,844	9,953	9,701	19,654	- 1,190
65-69 ..	5,739	5,427	11,166	15,301	16,049	31,350	20,184
70-74 ..	3,751	4,424	8,175	5,861	6,293	12,154	3,979
75-79 ..	2,937	3,673	6,610	2,857	3,495	6,352	- 258
80-84 ..	2,672	4,050	6,722	816	1,056	1,872	- 4,850
85-89 ..	1,246	1,926	3,172	576	874	1,450	- 1,722
90-94 ..	113	167	280	165	258	423	143
95-99 ..	26	44	70	70	182	252	182
100 and over	3	5	8	5	13	18	10
Not Stated	1	1	2	1	1	2	1
Total	15,118	13,137	28,255	11,672	9,898	21,570	- 6,685
Born outside Australia ..	518,829	384,444	903,273	417,046	327,141	744,187	- 159,086
Born in Australia ..	2,848,282	2,878,284	5,726,566	3,380,324	3,454,847	6,835,171	1,108,605
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

NOTE.—Minus sign (—) denotes decrease.

7. **Nationality.**—The number of foreign nationals in Australia decreased since the 1933 Census by 36 per cent.—males by 40 per cent. and females by 18 per cent.—as compared with an increase of 15 per cent. in the number of British nationality. There was little change, however, in the proportion of foreign nationals relative to the total population, 99.5 per cent. of the population being British subjects, as compared with 99.1 per cent. at the previous Census. The principal foreign nationals in Australia were Italian, 7,172; Chinese, 4,858; Greek, 4,504; United States of America, 3,351; German, 2,361; Yugoslav, 2,096; and Dutch, 2,001.

The number of persons in Australia who were born in countries outside the British Empire totalled approximately 128,000, and of this number 38,653, or 30 per cent., were of foreign nationality at 30th June, 1947, the remainder being British subjects, mainly by naturalization.

POPULATION: NATIONALITY (i.e., ALLEGIANCE), AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Nationality.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
British	3,318,228	3,251,290	6,569,518	3,768,091	3,772,614	7,540,705	971,187
Foreign—							
American (U.S.) ..	1,904	653	2,557	2,474	877	3,351	794
Chinese	7,615	177	7,792	4,329	529	4,858	2,934
Danish	1,046	233	1,279	393	89	482	797
Dutch	786	129	915	1,408	593	2,001	1,086
Estonian	515	323	838	159	96	255	583
Finnish	962	100	1,062	361	43	424	638
French	924	723	1,647	770	551	1,321	326
German	2,738	934	3,672	1,669	692	2,361	1,311
Greek	4,639	1,013	5,652	3,720	784	4,504	1,148
Italian	14,068	3,590	17,658	5,473	1,699	7,172	10,486
Japanese	1,937	147	2,084	70	8	78	2,006
Norwegian	1,150	88	1,238	685	60	745	493
Polish	1,068	749	1,757	839	721	1,560	197
Russian	1,283	772	2,055	333	210	543	1,512
Spanish	463	133	596	158	50	208	388
Swedish	1,274	96	1,370	548	47	595	775
Swiss	680	272	952	321	127	448	504
Yugoslav	2,503	323	2,826	1,753	343	2,096	730
Other	3,347	962	4,309	3,796	1,855	5,651	1,342
Total, Foreign ..	48,842	11,417	60,259	29,279	9,374	38,653	21,606
Not Stated	41	21	62	..	..	..	62
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

NOTE.—Minus sign (—) denotes decrease.

5. Race.—The people of Australia may be classified into two groups with respect to racial characteristics, namely, non-indigenous and indigenous. The former group comprises the European and other races who have migrated to Australia and their descendants born in Australia, while the latter group consists of the full-blood aboriginal natives of Australia whose estimated number at 30th June, 1944, was about 47,000, but who are not included in the general population figures of Australia. The non-indigenous population of Australia is fundamentally British in race and nationality.

At 30th June, 1947, 7,524,129 persons or 99.3 per cent. of the population were of full-blood European race and 0.7 per cent. of non-European and half-caste. Full-blood non-Europeans decreased from 22,780 in 1933 to 21,495 in 1947, but the number of half-castes increased from 27,066 to 33,734 during the same period.

The principal full-blood non-Europeans in Australia were Chinese, 9,144; Polynesian, 5,332; Natives of India, 2,480; and Syrian, 1,675; while half-caste Australian aboriginals, who increased from 20,620 in 1933 to 27,179 in 1947, represented 80.6 per cent. of the total half-caste population.

POPULATION: RACE, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Race.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Full-blood—							
European	3,334,775	3,245,218	6,579,993	3,765,238	3,758,891	7,524,129	944,136
Non-European—							
Chinese	9,311	1,535	10,846	6,594	2,550	9,144	— 1,702
Cingalese	196	78	274	97	53	150	— 124
Filipino	214	78	292	133	102	235	— 57
Indian (a)	2,216	188	2,404	2,278	202	2,480	76
Japanese	2,007	234	2,241	108	49	157	— 2,084
Malay	813	156	969	425	155	580	— 389
Polynesian(b) ..	1,185	562	1,747	2,840	2,402	5,332	3,585
Syrian	1,553	1,327	2,880	888	787	1,675	— 1,205
Other	814	313	1,127	1,244	498	1,742	615
Total, Non-European							
Full-blood	18,309	4,471	22,780	14,607	6,888	21,495	— 1,285
Half-caste—							
Australian Aboriginal ..	10,631	9,989	20,620	14,026	13,153	27,179	6,559
Chinese	1,901	1,602	3,503	1,599	1,351	2,950	— 553
Indian (a)	366	334	694	235	183	418	— 276
Japanese	116	109	225	32	24	56	— 169
Negro	119	89	208	79	45	124	— 84
Polynesian (b) ..	295	294	589	359	353	712	123
Syrian	149	153	302	111	112	223	— 79
Other	456	469	925	1,084	988	2,072	1,147
Total, Half-caste ..	14,027	13,039	27,066	17,525	16,209	33,734	6,668
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(a) Natives of India.

(b) Includes Maoris, Fijians, Papuans, and Torres Strait Islanders.

NOTE.—Minus sign (—) denotes decrease.

9. Religion.—At the 1921 Census 92,258 persons in Australia, or 1.7 per cent., gave no reply to this question, but in 1933 and again at the 1947 Census, when the public was informed there was no legal obligation to answer this question, 848,948 persons, or 12.8 per cent., and 824,824 or 10.9 per cent., respectively, gave no reply. Of males 11.7 per cent. and of females 10.0 per cent. did not state their religion in 1947.

Of those who stated their religion, the greatest numerical increase during the inter-censal period between 1933 and 1947 was recorded by the Church of England, followed by the Roman Catholic and Catholic (so described), which it is thought may be grouped without serious error, as the latter term usually signifies Roman Catholic. Then followed Methodist, Presbyterian and Church of Christ in that order. Amongst the denominations with the largest number of adherents, the greatest proportional increases since 1933 were recorded by Methodists, 27.4 per cent.; Roman Catholic and Catholic combined, 21.8 per cent.; Church of England, 15.3 per cent.; and Presbyterian, 4.2 per cent.

In 1933 and again in 1947, 99 per cent. of those who stated their religion professed the Christian faith. Since the previous Census, the number who stated they were of non-Christian religion increased by 28 per cent., and those specifically stating they had no religion increased by 71 per cent.

POPULATION : RELIGION, AUSTRALIA, 1933 AND 1947.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Religion.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Christian—							
Baptist	49,654	56,220	105,874	53,197	60,330	113,527	7,653
Brethren	4,501	5,542	10,043	5,807	7,195	13,002	2,959
Catholic, Greek	8,435	3,476	11,911	10,078	6,934	17,012	3,101
Catholic, Roman(a)	577,997	583,458	1,161,455	325,163	288,023	613,186	- 548,260
Catholic, undefined(a)	63,861	63,681	127,542	448,959	507,581	956,540	828,998
Church of Christ	28,820	33,934	62,754	33,276	38,495	71,771	9,017
Church of England	1,297,589	1,267,529	2,565,118	1,480,527	1,476,505	2,957,032	391,914
Congregational	30,411	34,791	65,202	29,364	33,879	63,243	- 1,959
Lutheran	32,569	28,234	60,803	34,854	32,037	66,891	6,088
Methodist	331,602	352,420	684,022	425,745	445,680	871,425	187,403
Presbyterian	356,743	356,486	713,229	366,892	376,643	743,540	30,311
Protestant, undefined	37,750	35,014	72,764	36,708	36,562	73,270	506
Salvation Army	14,297	16,913	31,210	17,542	20,030	37,572	6,362
Seventh Day Adventist	5,992	7,973	13,965	7,453	10,097	17,550	3,585
Other	19,605	22,241	41,846	27,492	29,883	57,375	15,529
Total, Christian	2,839,826	2,867,912	5,727,738	3,303,057	3,369,879	6,672,936	945,198
Non-Christian—							
Buddhist	640	95	735	349	62	411	- 324
Chinese	298	7	305	125	33	158	- 147
Confucian	772	15	787	307	50	357	- 430
Hebrew	12,183	11,370	23,553	16,426	15,503	32,019	8,466
Mohammedan	1,668	209	1,877	2,334	370	2,704	827
Other	865	348	1,213	621	292	913	- 300
Total, Non-Christian	16,426	12,044	28,470	20,162	16,400	36,562	8,092
Indefinite	5,181	4,085	9,266	9,838	8,870	18,708	9,442
No Religion	11,921	3,496	15,417	18,888	7,440	26,328	10,911
No Reply	473,757	375,191	848,948	445,425	379,399	824,824	- 24,124
Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(a) So described in individual Census Schedules.

NOTE.—Minus sign (—) denotes decrease.

10. Industry.—In the following table the male and female populations of Australia at the 1947 Census are classified according to the industry in which they are usually engaged. If the 124,439 persons (84,673 males and 39,766 females) for whom no particulars regarding industry were given on the Census schedules are included, the number of persons "in the work force" is 3,196,431, of whom 2,479,269 were males and 717,162 were females. It is believed that subsequent tabulations will furnish evidence to enable most, if not all, of the 124,439 persons in "Industry Not Stated" to be included in the work force. The remainder of the population, totalling 4,382,927 (1,318,101 males and 3,064,826 females), were classified as not being in the work force. The term "in the work force" includes persons of all ages who are employers, self-employed or working on their own account, wage and salary earners, unpaid helpers engaged in industry, and those who usually work for their living but who have lost their jobs.

Persons who do not earn their living by doing work for monetary reward, such as children, housewives, full-time students, retired persons, pensioners, and permanent inmates of institutions are regarded as not being in the work force.

On the average, 65 in every 100 of the male population and 19 in every 100 of the female population were in the work force, or in other words there were, in 1947, 3½ males to every female in the work force.

Of the males in the work force who stated their industry, those engaged in Manufacturing represented the largest proportion, namely 27.0 per cent., followed next in order by those in Primary Production, 19.8 per cent.; Commerce, 11.6 per cent.; Transport and Storage, 9.7 per cent.; Building and Construction 9.7 per cent.; and Public Authority (n.e.i.) and Professional Activities, 8.7 per cent.

As with the males, females in the work force who stated their industry were mostly engaged in Manufacturing, 27.2 per cent.; followed next in order by those in Public Authorities (n.e.i.) and Professional Activities, 20.6 per cent; Amusement, Hotels, Cafes, Personal Service, etc., 19.2 per cent.; and Commerce, 18.8 per cent.

POPULATION: NUMBER ENGAGED IN INDUSTRY, AUSTRALIA, 1947.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

					Census, 30th June, 1947.		
Industry Group.					Males.	Females.	Persons.
Primary Production—							
Fishing, Hunting and Trapping	..	..	..	..	16,311	82	16,393
Agriculture, Grazing and Dairying—							
Agriculture and Mixed Farming	..	..	..	..	232,682	7,958	240,640
Grazing	..	..	..	..	89,331	4,938	94,269
Dairying	..	..	..	..	96,508	10,018	106,526
Other	..	..	..	..	16,671	1,396	18,067
Total, Agriculture, etc.	..	..	..	..	435,192	24,310	459,502
Forestry	..	..	..	..	22,078	46	22,124
Total	..	..	..	..	473,581	24,438	498,019
Mining and Quarrying	..	..	..	..	53,838	553	54,391
Manufacturing—							
Inadequately Defined	..	..	..	..	5,926	2,919	8,845
Founding, Engineering and Metalworking (including Shipbuilding)	..	..	..	..	190,687	17,918	208,605
Manufacture of Clothing	..	..	..	..	19,904	69,309	89,213
Manufacture of Food and Drink	..	..	..	..	94,099	18,084	113,983
Paper, Printing, Bookbinding and Photography	..	..	..	..	42,557	15,148	57,705
Other	..	..	..	..	291,645	59,804	351,449
Total	..	..	..	..	645,718	184,082	829,800
Building and Construction—							
Inadequately Defined	..	..	..	..	135	..	135
Construction and Repair of Buildings	..	..	..	..	120,777	914	121,691
Construction Works and Maintenance (other than Buildings)	..	..	..	..	110,222	385	110,607
Total	..	..	..	..	231,134	1,299	232,433
Transport and Storage—							
Transport, undefined	..	..	..	..	4,168	323	4,491
Road Transport and Storage	..	..	..	..	105,732	4,922	110,654
Shipping and Loading and Discharging Vessels	..	..	..	..	48,695	1,666	50,361
Rail and Air Transport	..	..	..	..	73,944	6,926	80,870
Total	..	..	..	..	232,539	13,837	246,376
Communication	..	..	..	..	34,534	14,657	49,191
Finance and Property	..	..	..	..	52,443	21,268	73,711
Commerce	..	..	..	..	278,026	127,493	405,519
Public Authority (n.e.i.) and Professional Activities	..	..	..	..	209,436	139,375	348,811
Amusement, Hotels, Cafes, Personal Service, etc.	..	..	..	..	95,240	130,326	225,566
Other Industries	..	..	..	..	50	30	80
Industry Inadequately Defined	..	..	..	..	88,057	20,038	108,095
Industry Not Stated	..	..	..	..	84,073	39,766	124,439
Persons not in Work Force	..	..	..	..	1,318,101	3,064,826	4,382,927
Grand Total	..	..	..	..	3,797,370	3,781,988	7,579,358

11. **Occupational Status.**—The term "occupational status" has been substituted for "grade of occupation" formerly in use, and it relates to the capacity in which persons are engaged in the various branches of industry.

The number of employers in Australia at 30th June, 1947, was 221,289 compared with 207,680 at the previous Census. Persons who were self-employed or working on their own account increased from 369,375 in 1933 to 387,137 in 1947. Of the males in the work force, 74.4 per cent. were employees receiving wages or salaries at 30th June, 1947, and the corresponding proportion of female employees receiving wages or salaries was 87.3 per cent.

Persons not at work, including those not actively seeking a job at 30th June, 1947, amounted to 82,774, consisting of 66,009 males and 16,765 females.

At the Census of 30th June, 1947, 29,013 persons gave no answer to the question regarding occupational status, but, as with persons for whom no industry was stated, it is believed that subsequent tabulations will disclose that the majority, if not all, of these persons should be classified to the work force.

In 1933, wage-earners who were employed part-time were asked to indicate that fact on the Census Schedule in answer to the question regarding occupational status, and all those who so described themselves are included in the work force for that year. In 1947, however, persons working regularly, but for considerably less than normal working hours, were instructed on the Census Schedule to exclude themselves from the work force, unless their earnings from such work formed their principal means of livelihood.

POPULATION: OCCUPATIONAL STATUS, AUSTRALIA, 1933 AND 1947.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Occupational Status.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
In Work Force—							
At Work—							
Employer	186,849	20,831	207,680	196,932	24,357	221,289	13,609
Self-employed ..	318,951	50,424	369,375	342,650	44,487	387,137	17,762
Employee (on wage or salary)	1,184,002	434,502	1,618,504	1,827,072	620,421	2,447,493	828,989
Helper (not on wage or salary)	40,754	5,262	46,016	24,227	4,498	28,725	- 17,291
Total at Work ..	1,730,556	511,019	2,241,575	2,390,881	693,763	3,084,644	843,069
Not at Work (a) ..	405,269	75,775	481,044	66,009	16,765	82,774	- 398,270
Total in Work Force	2,135,825	586,794	2,722,619	2,456,890	710,528	3,167,418	444,799
Not in Work Force (b) ..	1,226,806	2,674,756	3,901,562	1,318,101	3,064,826	4,382,927	481,365
Not Stated	4,480	1,178	5,658	22,379	6,634	29,013	23,355
Grand Total	3,367,111	3,262,728	6,629,839	3,797,370	3,781,988	7,579,358	949,519

(a) Includes persons who were (1) unable to secure employment; (2) temporarily laid off from their jobs; or (3) not actively seeking work at the time of the Census on account of sickness or accident, industrial dispute, resting between jobs or for any other reason. (b) See last preceding paragraph above.

NOTE.—Minus sign (—) denotes decrease.

12. **Other General Characteristics.**—Questions regarding orphanhood, and the ability to read and write a foreign language (of persons who could not read and write English), were not asked on the schedules of the 1947 Census. Consequently, the latest Census data available concerning these questions are those of the 1933 Census, as published in previous issues of the Year Book (see No. 36, pp. 482 and 487).

Tables showing persons not at work at 30th June, 1947, classified according to cause and duration will be found in the Appendix.

§ 7. Dwellings.

1. Number of Dwellings.—In addition to the questions relating to the personal particulars of the individual members of the household there were a number of important questions on the Census Schedule designed to elicit information concerning the dwellings in which the population was housed at the date of the Census. From the replies to these questions much valuable information was tabulated concerning housing conditions. For the purpose of a Census a "dwelling" is defined as a room or a collection of rooms occupied by a household group living together as a "family unit" whether comprising the whole or only part of a house or other building (including temporary structures). Included in this definition are private houses, flats, tenements, hotels, boarding houses, hospitals, institutions, and other any structure used for the purpose of human habitation.

Since the 1933 Census, the number of dwellings in Australia, including those being built, increased by 371,194, or 22.9 per cent., a much higher rate of increase than that of the population during the same period, namely 14.3 per cent.

The following table represents a summary of the information relating to the number of dwellings in Australia at 30th June, 1947:—

DWELLINGS : AUSTRALIA, 1947 CENSUS.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINES.)

Division.	Occupied.	Unoccupied.	Being Built.	Total.	Percentage of Total Dwellings.
Urban—					%
Metropolitan	981,420	7,397	17,871	1,006,688	50.59
Provincial	332,543	7,303	6,679	346,585	17.42
Rural	593,932	32,281	10,208	636,421	31.99
Total	1,907,895	47,041	34,758	1,989,694	100.00

Details for each State and Territory are as follows:—

DWELLINGS : STATES, 1947 CENSUS.

State or Territory.	Occupied.	Unoccupied.	Being Built.	Total.
New South Wales	746,343	17,392	12,981	776,716
Victoria	527,406	11,412	11,328	550,146
Queensland	272,045	9,647	4,175	285,867
South Australia	168,538	3,547	2,794	174,879
Western Australia	124,767	2,606	1,535	128,908
Tasmania	62,484	2,351	1,607	66,442
Northern Territory	2,697	34	22	2,753
Australian Capital Territory	3,615	52	316	3,983
Total	1,907,895	47,041	34,758	1,989,694

2. **Class of Dwelling.**—As previously indicated, the dwellings in which the people are housed comprise private houses, tenements, flats, hotels, boarding-houses, charitable institutions, etc. It is desirable when considering the question of housing to exclude those forms of accommodation which do not represent the normal housing conditions associated with family life, and the statistics which follow relate mainly to private dwellings only, i.e., private houses, shares of private houses, tenements and flats.

At the 1947 Census 1,873,623, or 98.2 per cent. of the total occupied dwellings in Australia, were private dwellings, as compared with 1,509,671, or 97.6 per cent., at the 1933 Census. During the intercensal period the number of private dwellings in Australia increased by 363,952, or 24.1 per cent.; those in the metropolitan areas increased by 248,581, or 34.9 per cent.; those in the urban provincial by 76,466, or 30.6 per cent., and those in the rural areas by 38,905, or 7.1 per cent.

CLASS OF OCCUPIED DWELLING, AUSTRALIA, 1933 AND 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Number of Occupied Dwellings.									
Class of Occupied Dwelling.	Census, 30th June, 1933.				Census, 30th June, 1947.				Increase, 1933-47.
	Urban.		Rural.	Total, Australia.	Urban.		Rural.	Total, Australia.	
	Metro-politan.	Pro-vincial.			Metro-politan.	Pro-vincial.			
Private House (One Family)	651,138	240,199	543,182	1,434,519	739,870	284,133	561,250	1,585,253	(c)
Private House (Shared by Two or More Families)(a)					20,808	5,765	6,226	32,799	
Share of Private House(b) Flat (including Share of Flat)					72,724	19,627	13,660	106,011	
Tenement	61,768	9,412	3,972	75,152	94,822	12,697	3,880	111,399	
Total Occupied Private Dwellings ..	712,906	249,611	547,154	1,509,671	961,487	326,077	586,050	1,873,623	363,952
Caretaker's Quarters ..	1,326	483	651	2,460	1,110	279	352	1,741	— 719
Hotel ..	1,083	1,853	3,062	6,598	1,686	1,779	2,854	6,319	— 279
Boarding-house, Lodging House ..	14,092	3,606	3,234	20,932	15,302	3,367	2,512	21,181	— 249
Educational Institution	479	303	359	1,141	449	290	389	1,128	— 13
Religious Institution (non-educational) ..	52	13	30	95	85	21	42	148	— 53
Hospital ..	747	619	773	2,139	543	368	593	1,504	— 635
Charitable Institution (other than Hospital)	253	66	109	428	206	72	128	406	— 22
Penal Establishment ..	9	24	16	49	8	15	23	46	— 3
Military or Naval Establishment ..	19	16	10	45	85	49	94	228	— 183
Police Station or Barracks ..	209	300	1,011	1,520	26	53	42	121	d— 1,399
Fire Station ..	117	102	42	261	12	13	9	37	d— 224
Other (including Clubs)	310	231	1,308	1,849	418	160	835	1,413	— 436
Not Stated ..	45	32	111	188	..	..	..	..	— 188
Total Other Occupied Dwellings ..	19,341	7,648	10,716	37,705	19,933	6,466	7,873	34,272	— 3,433
Total Occupied Dwellings ..	732,247	257,259	557,870	1,547,376	981,420	332,543	593,932	1,907,895	360,519
Total Occupied Dwellings per square mile ..	579.99	82.99	0.19	0.52	711.45	120.88	0.20	0.64	0.12
Wagon, Van, etc. (including campers-out)	268	1,669	7,444	9,381	847	1,029	3,907	5,873	— 3,508

(a) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (b) Portions of shared private houses in respect of which portions separate Householders' Schedules were furnished. (c) Not available. (d) Residences attached to police stations and fire stations were classed as Private Dwellings in 1947.

NOTE.—Minus sign (—) denotes decrease.

For Census purposes a "flat" is defined as part of a house or other building ordinarily intended for occupation by a separate family group, and is a self-contained dwelling unit with both cooking and bathing facilities. A "tenement" is part of a house or other building ordinarily intended for occupation by a separate family group but is not a self-contained unit, and consists in the main of a room or rooms with cooking facilities.

Owing to the shortage of houses in Australia in 1947, information was sought at the Census as to the extent of house-sharing, and particulars as recorded are shown separately for 1947 in the following tables. In a number of cases where private houses were shared by more than one family unit, however, only one Householder's Schedule was returned for the whole of the house, instead of separate schedules for each portion occupied separately. These are shown in the tables as "Private Houses (Shared by Two or More Families)" and represent not "occupied dwellings" as defined for Census purposes, but "houses" occupied by more than one family.

In the case of the remaining private houses shared by more than one family, separate schedules were furnished for each portion occupied separately and these portions are shown in the tables as separate dwellings under the heading "Share of Private House".

3. **Population According to Class of Dwelling, etc.**—In the next table, the total number of persons in Australia are distributed according to the dwellings in which they were recorded on Census night.

Of the total population in 1947, 92.71 per cent. were living in private dwellings—houses, flats and tenements—whilst 552,598 persons, or 7.29 per cent. of the population spent the night in hotels, boarding houses, hospitals, institutions, etc., or on ships, or were camping out.

OCCUPIED DWELLINGS, ETC. AND INMATES, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS AND DWELLINGS OCCUPIED SOLELY BY THEM.)

Particulars.	Census, 30th June, 1933.			Census, 30th June, 1947.		
	Number of Dwellings.	Inmates.(a)		Number of Dwellings.	Inmates.(a)	
		Number.	Proportion on Total.		Number.	Proportion on Total.
			%			%
Private House(One Family)	1,434,519	5,956,922	89.85	1,585,253	6,138,332	80.99
Private House (Shared by Two or More Families)(b)				32,799	185,289	2.44
Share of Private House(c)				106,011	303,996	4.01
Flat(including Share of Flat)	75,152	207,787	3.13	111,399	316,115	4.17
Tenement				38,161	83,028	1.10
Total Private Dwellings	1,509,671	6,164,709	92.98	1,873,623	7,026,760	92.71
Dwellings other than private	37,795	432,046	6.52	34,272	520,204	6.86
Total Occupied Dwellings	1,547,376	6,596,755	99.50	1,907,895	7,546,964	99.57
Waggons, Camps, etc. ..	0,381	16,380	0.25	5,873	13,791	0.18
Migratory (d) .. ..	..	16,704	0.25	..	18,603	0.25
Total .. ..	..	6,629,839	100.00	..	7,579,358	100.00

(a) Includes persons sleeping out on verandahs or in sleep-outs. (b) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (c) Portions of shared private houses in respect of which portions separate Householder's Schedules were furnished. (d) Shipping, railway and air travellers.

4. *Occupied Private Dwellings.*—(i) *Materials of Outer Walls and of Roof.* In the following tables occupied private dwellings are classified according to the materials of which the outer walls and the roof were built.

Wood has been the most extensively used material in the construction of the walls, followed by brick and fibro cement, the respective percentages for Australia for occupied private dwellings for which the material of the walls was specified being—wood, 47.4 per cent., brick, 34.8 per cent. and fibro cement, 6.3 per cent. The latter has shown a most spectacular increase since 1933 when the number recorded was only 23,696 compared with 117,631 in 1947. Brick dwellings represented 57.6 per cent. of all occupied private dwellings in the Metropolitan Divisions whilst in the Urban Provincial and Rural Divisions wooden dwellings predominated, the respective percentage of such dwellings being 63.0 per cent. and 62.4 per cent.

Particulars regarding the materials of which the roofs of dwellings were constructed were not collected at the 1933 Census, but the results for 1947 show that, of the occupied private dwellings for which the materials of the roofs were specified, iron (68.1 per cent.) was by far the most popular material used for roofing private dwellings in Australia, followed by tiles (22.6 per cent.) and slates (5.8 per cent.).

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO MATERIAL OF OUTER WALLS, AUSTRALIA, 1933 AND 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

	Number of Occupied Private Dwellings.									
Material of Outer Walls.	Census, 30th June, 1933.					Census, 30th June, 1947.				
	Urban.		Rural.	Total, Aus- tralia.	Urban.		Rural.	Total, Aus- tralia.	Increase, 1933-47.	
	Metro- politan.	Pro- vincial.			Metro- politan.	Pro- vincial.				
Brick ..	393,528	45,320	29,071	467,919	551,618	60,215	38,179	650,012	182,093	
Stone ..	30,149	11,588	38,466	80,203	36,714	13,409	37,573	87,606	7,493	
Concrete ..	5,908	2,912	8,705	17,525	10,442	5,411	13,283	29,136	11,611	
Wood ..	266,528	166,990	353,753	787,271	315,567	204,863	364,221	884,651	97,380	
Iron, Tin ..	4,918	13,527	53,767	72,212	6,087	14,498	45,347	65,932	6,280	
Fibro Cement ..	5,847	3,773	14,076	23,696	31,924	23,586	62,121	117,631	93,935	
Steel ..	(a)	(a)	(a)	(a)	40	28	59	127	127	
Calico, Canvas, Hessian ..	873	3,554	33,428	37,855	656	1,539	13,255	15,450	22,405	
Bark ..	..	39	2,185	2,224	2	7	427	436	1,788
Lath and Plaster ..	2,916	514	1,607	5,037	3,163	809	1,220	5,192	155	
Malthoid, Rub- beroid and other like compositions ..	11	14	115	140	23	15	115	153	13	
Pisé ..	14	240	2,296	2,550	42	243	2,614	2,899	349	
Sun-dried Bricks ..	151	342	5,013	5,506	436	331	3,230	4,006	1,500	
Wattle and Daub ..	23	32	1,221	1,276	44	39	927	1,010	266	
Bushes, Rushes, Thatch ..	..	9	396	405	1	8	230	248	157
Other Materials ..	49	31	91	171	679	294	1,062	2,035	1,864	
Not stated ..	1,991	726	2,964	5,681	4,049	782	2,178	7,009	1,328	
Total Private Dwellings	712,906	249,611	547,154	1,509,671	961,487	326,077	586,059	1,873,623	363,952	

(a) Not tabulated separately in 1933.

NOTE.—Minus sign (—) denotes decrease.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO MATERIAL OF ROOF, AUSTRALIA, 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Material of Roof.	Number of Occupied Private Dwellings.			
	Urban.		Rural.	Total, Australia.
	Metro- politan.	Provincial.		
Concrete	4,945	367	486	5,798
Wood	1,382	542	2,136	4,060
Iron, Tin	452,869	283,829	520,861	1,257,559
Tiles	366,211	25,311	26,492	418,014
Slate	101,661	2,875	2,512	107,048
Fibro Cement	14,970	7,963	13,052	35,985
Steel	32	7	11	50
Calico, Canvas, Hessian	610	1,400	11,334	13,344
Bark	1	2	324	327
Malthoid, Rubberoid and other like compositions	2,844	154	732	3,730
Bushes, Rushes, Thatch	1	..	140	141
Other Materials	694	103	515	1,312
Not Stated	15,267	3,524	7,464	26,255
Total Private Dwellings	961,487	326,077	586,059	1,873,623

(ii) *Number of Rooms.* For Census purposes, the kitchen and any permanently enclosed sleep-out or portion of a verandah were included in the number of rooms in the dwelling, but the bathroom, pantry, laundry and storehouse were excluded unless generally used for sleeping. The average number of rooms per private house (one family) in Australia at 30th June, 1947, was 5.11 which was slightly higher than the average of 5.07 rooms for all private houses in 1933. The average number of rooms per private house (one family) in 1947 was highest in the metropolitan areas, namely 5.27 rooms and lowest in the rural areas, 4.89 rooms.

The average number of rooms for tenements and for flats was less than that for private houses, the average for tenements being 2.07 rooms and for flats 4.06 rooms. Tenements and flats were not recorded separately at the Census of 30th June, 1933, but the combined average at that date was 3.35 rooms.

Excluding houses with rooms unspecified, private houses of four, five and six rooms represented 79.3 per cent. of the total number of private houses (one family) in Australia at 30th June, 1947, and practically the whole of the total increase in the number of private houses since 1933 has been confined to houses containing these numbers of rooms.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF ROOMS, AUSTRALIA, 1933 AND 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Number of Occupied Private Dwellings.											
Number of Rooms per Dwelling.(a)	Census, 30th June, 1933.			Census, 30th June, 1947.						Increase, 1933-47.	
	Private House.	Tene- ment and Flat.	Total Private Dwel- lings.	Private House (One Family).	Private House (Shared by Two or More Fami- lies). (b)	Share of Private House. (c)	Flat (includ- ing Share of Flat).	Tene- ment.	Total Private Dwel- lings.		
1..	2,793	4,883	7,676	2,909	4	9,547	1,055	11,263	24,778	17,102	
2..	4,561	11,444	16,005	5,379	114	17,300	5,850	13,035	41,738	25,733	
3..	25,968	13,716	39,684	27,272	657	18,433	20,505	5,495	72,362	32,678	
4..	133,700	14,757	148,457	150,364	3,021	13,917	37,406	1,923	206,631	58,174	
5..	212,168	8,159	220,327	265,125	6,276	7,776	20,338	508	300,023	79,696	
6..	161,880	3,137	165,017	197,853	6,089	3,539	6,967	210	214,658	49,641	
7..	62,639	921	63,560	58,614	2,665	1,106	1,572	35	63,992	432	
8..	24,434	342	24,776	18,898	1,180	317	470	9	20,874	3,902	
9..	10,019	134	10,153	6,499	389	103	147	1	7,139	3,014	
10 and over	9,800	84	9,884	5,530	296	49	86	..	5,961	3,923	
Not Stated	3,176	4,191	7,367	1,427	117	577	426	784	3,331	4,036	
Total Private Dwellings	651,138	61,768	712,906	739,870	20,808	72,724	94,822	33,263	961,487	248,581	
Average number of rooms per Private Dwelling(a)	5.39	3.45	5.23	5.27	5.66	3.15	4.07	2.02	4.89	0.34	

URBAN PROVINCIAL.

1..	6,262	1,294	7,556	3,775	13	2,418	85	956	7,247	309	
2..	5,800	2,342	8,142	4,057	57	4,288	901	1,396	12,099	3,957	
3..	9,540	2,082	11,622	10,666	194	4,903	3,285	904	19,952	8,330	
4..	50,915	1,417	52,332	60,602	910	3,902	4,677	390	70,574	18,212	
5..	80,519	651	81,170	105,556	1,026	2,208	2,610	83	112,383	31,213	
6..	52,597	249	52,846	68,136	1,576	873	803	37	71,427	18,551	
7..	19,741	75	19,816	19,560	642	249	182	4	20,646	830	
8..	7,292	24	7,316	6,293	267	77	60	..	6,607	809	
9..	2,853	13	2,866	2,683	75	29	20	..	2,207	669	
10 and over	2,835	11	2,846	1,469	74	13	12	..	1,568	1,278	
Not Stated	1,735	1,224	2,959	1,025	22	167	68	85	1,367	1,592	
Total Private Dwellings	240,199	9,412	249,611	284,133	5,765	19,627	12,697	3,855	326,077	76,466	
Average number of rooms per Private Dwelling (a)	5.13	2.90	5.06	5.11	5.50	3.15	3.99	2.30	4.92	0.14	

(a) Includes kitchen and any permanently enclosed sleep-out or portion of a verandah but does not include bathroom, pantry, store or outhouse, unless generally used for sleeping. (b) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (c) Portions of shared private houses in respect of which portions separate Householder's Schedules were furnished.

NOTE.—Minus sign (—) denotes decrease.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF ROOMS, AUSTRALIA, 1933 AND 1947—continued.

Number of Rooms per Dwelling.(a)	Number of Occupied Private Dwellings.										Increase, 1933-47.
	Census, 30th June, 1933.			Census, 30th June, 1947.							
	Private House.	Tenement and Flat.	Total Private Dwell- ings.	Private House (One Family).	Private House (Shared by Two or More Fam- ilies). (b)	Share of Private House. (c)	Flat (includ- ing Share of Flat).	Tenement.	Total Private Dwell- ings.		
1..	48,467	596	49,063	23,769	39	1,340	33	160	25,341	— 23,722	
2..	32,370	1,070	33,440	21,810	132	3,279	325	314	25,860	— 7,580	
3..	39,427	844	40,271	37,606	323	3,608	1,048	324	42,909	2,638	
4..	122,081	498	122,579	133,873	1,025	2,959	1,353	182	139,392	16,813	
5..	130,456	194	130,650	161,874	1,747	1,509	741	40	165,911	35,261	
6..	89,343	65	89,408	108,625	1,505	570	246	5	110,951	21,543	
7..	39,804	26	39,830	40,679	711	184	63	1	41,638	1,808	
8..	17,349	7	17,356	16,250	369	63	37	..	16,719	— 637	
9..	6,978	4	6,982	5,928	161	20	6	..	6,115	— 867	
10 and over	9,109	2	9,111	6,917	178	26	2	..	7,123	— 1,988	
Not Stated	7,798	666	8,464	3,919	36	102	26	17	4,100	— 4,364	
Total Private Dwellings	543,182	3,972	547,154	561,250	6,226	13,660	3,880	1,043	586,059	38,905	
Average number of rooms per Private Dwelling(a)	4.67	2.70	4.65	4.81	5.58	3.23	3.95	2.66	4.85	0.20	

TOTAL, AUSTRALIA.

1..	57,522	6,773	64,295	30,453	56	13,305	1,173	12,379	57,366	— 6,929
2..	42,731	14,856	57,587	32,146	303	25,427	7,070	14,745	79,697	22,110
3..	74,935	16,642	91,577	75,544	1,174	26,944	24,838	6,723	135,223	43,646
4..	306,606	16,702	323,398	344,929	4,965	20,778	43,430	2,495	416,597	93,199
5..	423,143	9,004	432,147	532,555	9,949	11,493	23,689	631	578,317	146,170
6..	303,820	3,451	307,271	374,616	9,170	4,082	8,016	252	397,036	89,765
7..	122,184	1,022	123,206	118,862	4,018	1,539	1,817	40	120,276	3,070
8..	49,175	373	49,548	41,351	1,816	457	567	9	44,200	— 5,348
9..	19,860	151	20,011	14,510	625	152	173	1	15,461	— 4,550
10 and over	21,744	97	21,841	13,916	548	88	100	..	14,652	— 7,189
Not Stated	12,709	6,081	18,790	6,371	175	846	520	886	8,798	— 9,992
Total Private Dwellings	1,434,519	75,152	1,509,671	1,585,253	32,799	106,011	111,399	38,161	1,873,623	363,952
Average number of rooms per Private Dwelling(a)	5.07	3.35	4.99	5.11	5.61	3.16	4.06	2.07	4.88	0.11

(a) Includes kitchen and enclosed sleep-out or portion of a verandah that has been permanently enclosed but does not include bathroom, pantry, store or outhouse, unless generally used for sleeping. (b) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (c) Portions of shared private houses in respect of which portions separate Householder's Schedules were furnished.

NOTE.—Minus sign (—) denotes decrease.

(iii) *Number of Inmates.* A classification of occupied private dwellings according to the number of inmates is shown in the following table.

The most usual number of inmates residing in private houses occupied by one family for Australia as a whole was four, followed very closely by three and then by two and five inmates in that order. The average number of inmates in such private houses was 3.87 compared with an average of 4.15 inmates for all private houses in 1933.

It was known that "House sharing" existed during the economic depression at the time of the 1933 Census, but information concerning its extent was not sought from householders on that occasion. In the circumstances, it may be more appropriate to compare the average number of inmates in private houses in 1933 with a figure obtained after

combining dwellings consisting of private houses and shares and their inmates in 1947. If shares of private houses are converted to actual houses on the basis of the average number of family groups residing in private houses shared by two or more families, the estimated average number of inmates in all private houses in 1947 would rise to 3.97 persons.

Two inmates predominated in flats, but tenements with one inmate were slightly in excess of those with two inmates. The averages for Australia were flats, 2.84 persons and tenements, 2.18 persons.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF INMATES, AUSTRALIA, 1933 AND 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Number of Occupied Private Dwellings.											
Number of Inmates per Dwelling.(a)	Census, 30th June, 1933.			Census, 30th June, 1947.							Increase, 1933-47.
	Private House.	Tenement and Flat.	Total Private Dwellings.	Private House (One Family).	Private House (Shared by Two or More Families). (b)	Share of Private House. (c)	Flat (including Share of Flat).	Tenement.	Total Private Dwellings.		
METROPOLITAN.											
1.. ..	24,932	9,833	34,765	29,205	..	12,110	12,158	12,232	65,705	30,940	
2.. ..	104,124	21,458	125,582	134,375	882	24,144	33,104	11,357	203,862	78,280	
3.. ..	139,275	15,708	154,983	169,962	2,326	17,901	25,646	5,689	221,524	66,541	
4.. ..	141,427	8,612	150,039	174,243	3,901	10,193	14,827	2,404	205,568	55,529	
5.. ..	103,450	3,744	107,194	113,686	4,172	4,562	5,812	977	129,209	22,015	
6.. ..	63,991	1,461	65,452	60,768	3,617	2,098	2,051	339	68,873	3,421	
7.. ..	36,012	607	36,619	30,254	2,415	985	775	153	34,582	—	2,037
8.. ..	20,203	234	20,437	15,393	1,580	496	306	70	17,845	—	2,592
9.. ..	8,986	73	9,059	6,084	827	146	8c	23	7,160	—	1,899
10 and over	8,738	38	8,776	5,900	1,088	89	63	19	7,159	—	1,617
Total Private Dwellings	651,138	61,768	712,906	739,870	20,808	72,724	94,822	33,263	961,487	248,581	
Total Inmates(a)	2,707,777	169,028	2,876,805	2,892,194	116,235	203,390	265,259	70,594	3,547,672	670,867	
Average number of Inmates per Private Dwelling(a)	4.16	2.74	4.04	3.91	5.59	2.80	2.80	2.12	3.69	—	0.35
URBAN PROVINCIAL.											
1.. ..	18,142	1,676	19,818	18,520	..	2,838	1,229	941	23,528	3,710	
2.. ..	37,362	2,709	40,071	53,536	238	6,107	4,043	1,326	65,250	25,179	
3.. ..	45,645	2,419	48,064	60,319	605	4,853	3,328	870	69,975	21,911	
4.. ..	45,932	1,374	47,306	60,281	1,055	2,880	2,318	424	66,967	19,661	
5.. ..	36,152	651	36,803	41,426	1,093	1,477	1,021	174	45,191	8,388	
6.. ..	24,217	331	24,548	23,890	937	734	406	64	26,031	1,483	
7.. ..	14,903	140	15,043	12,850	745	377	203	33	14,208	—	835
8.. ..	9,255	78	9,333	7,147	489	219	89	17	7,961	—	1,372
9.. ..	4,184	23	4,207	3,022	244	69	34	4	3,173	—	834
10 and over	4,407	11	4,418	3,142	359	64	26	2	3,593	—	825
Total Private Dwellings	240,199	9,412	249,611	284,133	5,765	19,627	12,697	3,855	326,077	76,466	
Total Inmates(a)	1,003,677	27,017	1,030,694	1,107,052	33,085	58,651	38,823	9,579	1,247,190	216,496	
Average number of Inmates per Private Dwelling(a)	4.18	2.87	4.13	3.90	5.74	2.99	3.06	2.48	3.82	—	0.

(a) Includes all persons sleeping out on verandahs or in sleep-outs.

(b) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished.

(c) Portions of shared private houses in respect of which portions separate Householder's Schedules were furnished.

NOTE.—Minus sign (—) denotes decrease.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF INMATES, AUSTRALIA, 1933 AND 1947—continued.

Number of Inmates per Dwelling.(a)	Number of Occupied Private Dwellings.										Increase, 1933-47.
	Census 30th June, 1933.			Census, 30th June, 1947.							
	Private House.	Tenement and Flat.	Total Private Dwellings.	Private House (One Family).	Private House (Shared by Two or More Families). (b)	Share of Private House. (c)	Flat (including Share of Flat).	Tenement.	Total Private Dwellings.		
1.. ..	73,427	775	74,202	60,330	..	1,922	357	187	62,796	-	11,406
2.. ..	81,214	1,020	82,234	105,440	360	3,788	1,190	337	111,115	-	28,881
3.. ..	86,905	959	87,864	108,605	577	3,444	1,050	284	113,960	-	26,096
4.. ..	88,142	601	88,743	106,463	992	2,296	693	116	110,560	-	21,817
5.. ..	73,955	321	74,276	77,510	1,204	1,141	335	73	80,263	-	5,987
6.. ..	53,945	145	54,090	47,587	1,083	577	155	21	49,423	-	4,667
7.. ..	36,124	77	36,201	26,790	741	283	57	15	27,886	-	8,315
8.. ..	24,297	48	24,345	15,391	567	147	29	9	16,143	-	8,202
9.. ..	11,400	16	11,416	6,201	286	29	8	..	6,524	-	4,892
10 and over.	13,773	10	13,783	6,933	416	33	6	1	7,389	-	6,394
Total Private Dwellings..	543,182	3,972	547,154	561,250	6,226	13,660	3,880	1,043	586,059	-	38,905
Total Inmates(a)	2,245,468	11,742	2,257,210	2,139,086	35,969	41,955	12,033	2,855	2,231,898	-	25,312
Average number of Inmates per Private Dwelling(a) ..	4.13	2.96	4.13	3.81	5.78	3.07	3.10	2.74	3.81	-	0.32

RURAL.

TOTAL, AUSTRALIA.

1.. ..	116,501	12,284	128,785	108,055	..	16,870	13,744	13,360	152,029	-	23,244
2.. ..	222,700	25,187	247,887	293,351	1,480	34,039	38,337	13,020	380,227	-	132,340
3.. ..	271,825	19,086	290,911	338,886	3,508	26,198	30,024	6,843	405,459	-	114,548
4.. ..	275,501	10,587	286,088	340,987	5,948	15,378	17,838	2,944	383,095	-	97,007
5.. ..	213,557	4,716	218,273	232,622	6,469	7,180	7,168	1,224	254,663	-	36,390
6.. ..	142,153	1,937	144,090	132,245	5,637	3,409	2,612	424	144,327	-	237
7.. ..	87,039	824	87,863	60,894	3,901	1,645	1,035	201	76,676	-	11,187
8.. ..	53,755	360	54,115	37,931	2,636	862	424	96	41,949	-	12,166
9.. ..	24,570	112	24,682	15,307	1,357	244	122	27	17,057	-	7,625
10 and over.	26,918	59	26,977	15,975	1,863	186	95	22	18,141	-	8,836
Total Private Dwellings..	1,434,519	75,152	1,509,671	1,585,253	32,799	106,011	111,399	38,161	1,873,623	-	363,952
Total Inmates(a)	5,956,922	207,787	6,164,709	6,138,332	185,289	303,996	316,115	83,028	7,026,760	-	862,051
Average number of Inmates per Private Dwelling(a) ..	4.15	2.76	4.08	3.87	5.65	2.87	2.84	2.18	3.75	-	0.33

(a) Includes all persons sleeping out on verandahs or in sleep-outs. (b) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (c) Portions of shared private houses in respect of which portions separate Householder's Schedules were furnished.

NOTE.—Minus sign (—) denotes decrease.

(iv) *Nature of Occupancy.* At the 1947 Census, 50.8 per cent. of the private houses occupied by one family in Australia for which particulars were supplied were occupied by owners; 9.0 per cent. by purchasers by instalments; 37.3 per cent. by tenants; and 2.9 per cent. by others. The percentages for all private houses in 1933 were—owners, 42.8 per cent.; purchasers by instalments, 13.5 per cent.; tenants, 39.1 per cent.; and others, 4.6 per cent.

In the metropolitan areas 56.0 per cent. of the occupants of private houses occupied by one family were owners or purchasers by instalments, as compared with 60.2 per cent. in the urban provincial areas, and 64.8 per cent. in the rural. In the latter areas, however, the ownership of the house is associated with the ownership of the land acquired as a means of livelihood.

Tenants occupied 88.9 per cent. of the flats and 96.2 per cent. of the tenements in Australia in 1947. Separate particulars for flats and tenements were not recorded in 1933 but taking flats and tenements together at that date 91.4 per cent. were occupied by tenants.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NATURE OF OCCUPANCY AUSTRALIA, 1933 AND 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Nature of Occupancy.	Number of Occupied Private Dwellings.								Increase, 1933-47.
	Census, 30th June, 1933.			Census, 30th June, 1947.					
	Private House.	Tenement and Flat.	Total Private Dwellings.	Private House (One Family).	Private House (Shared by Two or More Families). (a)	Share of Private House. (b)	Flat (including Share of Flat).	Tenement.		Total Private Dwellings.

METROPOLITAN.

Owner ..	214,939	3,600	218,539	318,921	7,021	13,401	8,368	617	318,338	129,789
Purchaser by Instalments ..	116,807	498	117,305	93,520	1,712	2,562	370	86	98,250	19,055
Tenant ..	395,793	54,600	450,393	317,183	11,793	55,770	81,883	31,890	501,529	141,136
Caretaker ..	5,709	701	6,410	4,206	144	305	624	228	5,507	903
Other Methods of Occupancy ..	2,856	290	3,146	2,648	46	129	290	202	3,315	169
Not Stated ..	5,124	1,989	7,113	3,393	93	551	281	240	4,558	2,555
Total Private Dwellings ..	651,138	61,768	712,906	739,870	20,808	72,724	94,822	33,263	961,487	248,581

URBAN PROVINCIAL.

Owner ..	99,978	443	100,421	143,943	2,386	4,091	1,677	141	152,238	51,817
Purchaser by Instalments ..	28,654	66	28,720	25,325	387	580	84	16	26,392	2,328
Tenant ..	100,114	8,215	108,329	100,200	2,821	14,118	10,712	3,594	137,781	29,422
Caretaker ..	4,888	134	5,022	3,599	86	159	109	48	4,001	1,021
Other Methods of Occupancy ..	2,720	90	2,810	2,208	24	53	53	13	2,351	459
Not Stated ..	3,815	464	4,279	2,852	61	296	62	43	3,314	965
Total Private Dwellings ..	240,199	9,412	249,611	284,133	5,765	19,627	12,697	3,855	326,077	76,466

(a) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (b) Portions of shared private houses in respect of which portions separate Householder's Schedules were furnished.

NOTE.—Minus sign (—) denotes decrease.

OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NATURE OF OCCUPANCY, AUSTRALIA, 1933 AND 1947—*continued.*

	Number of Occupied Private Dwellings.									
	Census, 30th June, 1933.				Census, 30th June, 1947.					
Nature of Occupancy.	Private House.	Tenement and Flat.	Total Private Dwellings.	Private House (One Family).	Private House (Shared by Two or More Families). (a)	Share of Private House. (b)	Flat (including Share of Flat).	Tenement.	Total Private Dwellings.	Increase, 1933-47.
RURAL.										
Owner	285,231	222	285,453	329,773	3,358	3,641	635	52	337,459	52,006
Purchaser by Installments	43,574	28	43,602	22,359	291	330	49	6	23,035	— 20,567
Tenant	143,428	3,232	146,660	158,457	2,115	8,801	3,107	960	173,440	26,780
Caretaker	29,218	113	29,331	17,340	188	257	43	10	17,838	— 11,493
Other Methods of Occupancy	19,003	73	19,166	15,494	151	189	17	4	15,855	— 3,311
Not Stated	22,638	304	22,942	17,827	123	442	29	11	18,432	— 4,510
Total Private Dwellings	543,182	3,972	547,154	561,250	6,226	13,660	3,880	1,043	586,050	38,905
TOTAL, AUSTRALIA.										
Owner	600,148	4,265	604,413	792,637	12,765	21,133	10,680	810	838,025	233,612
Purchaser by Installments	189,035	592	189,627	141,204	2,390	3,472	503	108	147,077	— 41,950
Tenant	549,275	66,137	615,412	581,845	16,728	79,025	98,708	36,444	812,750	197,338
Caretaker	39,815	948	40,763	25,145	418	721	776	266	27,346	— 13,417
Other Methods of Occupancy	24,669	453	25,122	20,350	221	371	360	219	21,521	— 3,601
Not Stated	31,577	2,757	34,334	24,072	277	1,289	372	294	26,304	— 8,030
Total Private Dwellings	1,434,510	75,152	1,509,671	1,585,253	32,799	106,011	111,399	38,161	1,873,623	363,952

(a) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (b) Portions of shared private houses in respect of which portions separate Householder's Schedules were furnished.

NOTE.—Minus sign (—) denotes decrease.

(v) *Rent per Week.* (a) *All Tenanted Private Dwellings.* Information tabulated concerning rents was restricted to the actual rent paid per week by tenants occupying unfurnished private dwellings. For 6.4 per cent. of private houses occupied by one family at 30th June, 1947, the rent was less than 10s. per week; for 29.9 per cent., between 10s. and £1 per week; for 40.3 per cent., between £1 and £1 10s. per week; for 17.9 per cent. between £1 10s. and £2 per week; and for 5.5 per cent. £2 per week and over. Ninety per cent. of the houses with rents of less than 10s. per week were located outside the metropolitan areas.

Throughout Australia the average rent for unfurnished private houses occupied by one family was 22s. 7d. per week. In the metropolitan areas the average was 25s. 8d. per week, in the urban provincial areas 21s. 5d., and in the rural areas 15s. 5d.

The average rent for unfurnished flats in the metropolitan areas was 37s. 9d. per week, or 47 per cent. more than that paid for private houses (one family) in the same areas, notwithstanding that private houses (one family) in the metropolitan areas contain nearly 30 per cent. more rooms than flats. In the urban provincial and rural areas, the rent of flats was approximately 30 per cent. and 51 per cent. respectively higher than for private houses (one family). Nearly 86 per cent. of the tenanted flats were located in the metropolitan areas, 10.8 per cent. in the urban provincial areas, and only 3.2 per cent. in the rural areas. For 5.3 per cent. of all tenanted flats in Australia the rent was less than £1 per week; for 23.5 per cent. between £1 and £1 10s. per week; for 37.0 per cent. between £1 10s. and £2 per week; and for 34.2 per cent. £2 per week and over.

During the latest intercensal period the average rent per week for unfurnished private houses rose by 33 per cent., or from an average of 17s. per week for all private houses in 1933 to an average of 22s. 7d. per week for private houses occupied by one family in 1947. Similar comparisons for flats and tenements are not possible as data were not tabulated separately for these dwellings in 1933. The average rent for all private dwellings including private houses, shares of private houses, flats and tenements rose by 38 per cent. from 1933 to 1947.

TENANTED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO WEEKLY RENT (UNFURNISHED), AUSTRALIA, 1933 AND 1947.
(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Number of Occupied Private Dwellings.										
Weekly Rent (Unfurnished).	Census, 30th June, 1933.			Census, 30th June, 1947.					Increase, 1933-47.	
	Private House.	Tene- ment and Flat.	Total Private Dwell- ings.	Private House (One Family).	Private House (Shared by Two or More Fam- ilies.) (a)	Share of Private House. (b)	Flat (includ- ing Share of Flat).	Tene- ment.		Total Private Dwell- ings.
METROPOLITAN.										
Under 5s. . .	1,064	599	1,663	297	6	77	20	56	456	1,207
5s. and under 10s. . .	14,635	5,698	20,333	2,925	67	1,157	110	405	4,664	15,669
10s. " " 15s. . .	62,747	9,008	71,755	22,146	532	4,551	626	1,048	28,903	42,852
15s. " " 20s. . .	79,103	7,262	86,365	43,297	1,229	4,984	1,847	1,738	53,095	33,276
20s. " " 25s. . .	66,723	7,737	74,460	65,987	2,168	7,272	5,342	1,970	82,739	8,276
25s. " " 30s. . .	32,997	6,780	39,777	64,793	2,399	6,308	8,520	1,428	83,418	43,641
30s. " " 35s. . .	16,285	5,118	21,403	47,114	1,859	4,979	13,045	936	67,933	46,530
35s. " " 40s. . .	5,700	2,574	8,274	22,417	926	2,201	12,468	444	38,456	30,182
40s. " " 50s. . .	5,138	2,854	7,992	14,879	866	1,636	14,242	335	31,958	23,966
50s. " " 60s. . .	1,537	1,105	2,642	4,489	289	467	5,489	120	10,854	8,212
60s. " " 70s. . .	829	659	1,488	1,771	112	151	2,226	49	4,309	2,821
70s. " " 80s. . .	280	313	593	663	39	45	1,047	21	1,815	1,222
80s. " " 90s. . .	195	250	445	431	15	11	621	6	1,084	630
90s. " " 100s. . .	66	123	189	202	4	9	271	1	487	298
100s. and over . .	192	290	482	430	10	10	679	..	1,129	647
Not Stated . .	18,212	4,320	22,532	25,371	1,271	21,918	18,336	23,333	90,229	67,697
Total Private Dwellings . .	305,703	54,690	360,393	317,182	11,792	55,776	84,889	31,890	501,529	141,136
Weekly Rent (Unfurnished) per Private Dwelling	19s. 7d.	23s. 6d.	20s. 2d.	25s. 8d.	27s. 7d.	23s. 6d.	37s. 9d.	22s. 8d.	27s. 5d.	7s. 3d.
URBAN PROVINCIAL.										
Under 5s. . .	2,336	501	2,837	771	4	85	1	15	876	1,961
5s. and under 10s. . .	11,883	1,982	13,865	3,357	47	714	48	130	4,296	9,569
10s. " " 15s. . .	28,644	1,974	30,618	13,526	314	1,670	249	181	15,940	14,678
15s. " " 20s. . .	24,110	1,076	25,186	18,313	438	1,385	584	156	20,876	4,310
20s. " " 25s. . .	15,998	808	16,806	23,886	669	1,894	1,651	265	28,365	11,559
25s. " " 30s. . .	5,922	388	6,310	17,844	452	1,305	1,331	160	21,092	14,782
30s. " " 35s. . .	2,576	251	2,827	10,317	265	784	1,225	68	12,659	9,832
35s. " " 40s. . .	644	68	712	3,231	81	213	685	27	4,237	3,525
40s. " " 50s. . .	465	40	505	2,071	77	131	641	20	2,940	2,435
50s. " " 60s. . .	86	9	95	457	20	26	183	5	691	596
60s. " " 70s. . .	52	5	57	149	6	8	43	..	206	149
70s. " " 80s. . .	9	1	10	54	2	4	10	..	70	60
80s. " " 90s. . .	4	1	5	29	..	..	9	..	38	33
90s. " " 100s. . .	5	1	6	8	..	..	2	..	10	4
100s. and over . .	7	..	7	12	..	..	..	..	12	5
Not Stated . .	7,403	1,110	8,513	12,181	446	6,229	4,050	2,567	25,473	16,960
Total Private Dwellings . .	100,144	8,215	108,359	106,206	2,821	14,448	10,712	3,594	137,781	29,422
Weekly Rent (Unfurnished) per Private Dwelling	15s. 9d.	13s. 5d.	15s. 7d.	21s. 5d.	22s. 2d.	19s. 3d.	27s. 9d.	18s. 10d.	21s. 8d.	6s. 1d.

(a) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (b) Portions of shared private houses in respect of which portions separate Householder's Schedules were furnished.

NOTE.—Minus sign (—) denotes decrease.

TENANTED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO WEEKLY RENT (UNFURNISHED), AUSTRALIA, 1933 AND 1947—continued.

Number of Occupied Private Dwellings.

Weekly Rent (Unfurnished).	Census, 30th June, 1933.			Census, 30th June, 1947.						Increase, 1933-47.	
	Private House.	Tene- ment and Flat.	Total Private Dwel- lings.	Private House (One Family).	Private House (Shared by Two or More Fam- ilies). (a)	Share of Private House. (b)	Flat (includ- ing Share of Flat).	Tene- ment.	Total Private Dwel- lings.		
RURAL.											
Under 5s. . .	14,453	416	14,869	5,728	30	137	4	16	5,915	-8,954	
5s. and under 10s. . .	31,103	980	32,083	19,042	170	758	40	53	20,063	-12,020	
10s. " " 15s. . .	32,715	720	33,435	30,563	310	1,276	109	57	32,405	-1,030	
15s. " " 20s. . .	15,760	276	16,036	21,318	280	877	288	53	22,816	6,780	
20s. " " 25s. . .	9,009	164	9,172	19,211	295	957	428	60	20,951	11,778	
25s. " " 30s. . .	2,818	42	2,860	9,317	152	444	307	39	10,253	7,393	
30s. " " 35s. . .	1,034	17	1,051	4,962	113	247	213	22	5,557	4,506	
35s. " " 40s. . .	178	2	180	1,289	26	57	76	2	1,450	1,270	
40s. " " 50s. . .	166	4	170	1,075	34	9	86	2	1,249	1,079	
50s. " " 60s. . .	53	2	55	306	12	7	26	..	351	296	
60s. " " 70s. . .	20	1	21	131	3	3	0	..	146	125	
70s. " " 80s. . .	4	1	5	27	1	2	2	..	32	27	
80s. " " 90s. . .	2	..	2	19	2	..	1	..	22	20	
90s. " " 100s. . .	..	..	..	2	..	..	..	..	2	2
100s. and over ..	4	..	4	14	..	..	..	..	14	10
Not Stated ..	36,109	607	36,716	45,453	687	3,987	1,431	656	52,214	15,498	
Total Private Dwellings ..	143,428	3,232	146,660	158,457	2,115	8,801	3,107	960	173,440	26,780	
Weekly Rent (Unfurnished) per Private Dwelling	11s. 2d.	9s. 11d.	11s. 2d.	15s. 5d.	18s. 4d.	15s. 11d.	23s. 4d.	16s. 5d.	15s. 7d.	4s. 5d.	
TOTAL, AUSTRALIA.											
Under 5s. . .	17,853	1,516	19,369	6,796	40	299	25	87	7,247	-12,122	
5s. and under 10s. . .	57,621	8,660	66,281	25,324	284	2,629	198	588	29,023	-37,258	
10s. " " 15s. . .	124,106	11,702	135,808	66,235	1,156	7,497	1,074	1,286	77,248	-58,560	
15s. " " 20s. . .	118,973	8,614	127,587	82,928	1,947	7,246	2,719	1,947	96,787	-30,800	
20s. " " 25s. . .	91,730	8,709	100,439	109,084	3,132	10,123	7,421	2,295	132,055	31,616	
25s. " " 30s. . .	41,737	7,210	48,947	91,924	3,003	8,057	10,152	1,627	114,763	65,816	
30s. " " 35s. . .	19,895	5,386	25,281	62,393	2,237	6,010	14,483	1,026	86,149	60,868	
35s. " " 40s. . .	6,522	2,644	9,166	26,937	1,033	2,471	13,229	473	44,143	34,977	
40s. " " 50s. . .	5,769	2,898	8,667	18,025	977	1,816	14,972	357	36,147	27,480	
50s. " " 60s. . .	1,676	1,116	2,792	5,252	321	500	5,698	125	11,896	9,104	
60s. " " 70s. . .	901	665	1,566	2,051	121	162	2,278	49	4,661	3,095	
70s. " " 80s. . .	293	315	608	744	42	51	1,059	21	1,917	1,309	
80s. " " 90s. . .	201	251	452	479	17	11	631	6	1,144	692	
90s. " " 100s. . .	71	124	195	212	4	9	273	1	499	304	
100s. and over ..	203	290	493	456	10	10	679	..	1,155	662	
Not Stated ..	61,724	6,037	67,761	83,005	2,404	32,134	23,817	26,556	167,916	100,155	
Total Private Dwellings ..	549,275	66,137	615,412	581,845	16,728	79,025	98,708	36,444	812,750	197,338	
Weekly Rent (Unfurnished) per Private Dwelling	17s. 8d.	21s. 9d.	17s. 6d.	22s. 7d.	25s. 9d.	22s. 0d.	36s. 7d.	22s. 1d.	24s. 2d.	6s. 8d.	

(a) Private house shared by two or more family units or household groups in respect of which only one Householder's Schedule was furnished. (b) Portions of shared private houses in respect of which portions separate Householders' Schedules were furnished.

NOTE.—Minus sign (—) denotes decrease.

(b) *Private Houses of Three to Six Rooms.* Special tabulations of rents were undertaken for tenanted private houses of three to six rooms with walls of wood or of brick or stone. The particulars for this group of private dwellings, which represented about 80 per cent. of all tenanted private houses in Australia, provide a very convenient summary of average rents ruling at the time of the Census.

Rents were summarized for 468,536 tenanted private houses (occupied by one family) in this group. Forty-nine per cent. had walls of brick or stone and 51 per cent.

of wood compared with proportions of 46 and 54 per cent. respectively for all rented private houses in a similar tabulation in 1933. During the intercensal period there was little variation in the numbers of rented houses of three, four and six rooms but the number of rented houses of five rooms increased by nearly 13 per cent. Brick dwellings were largely responsible for this increase.

The average rent of 25s. per week for all private houses, three to six rooms, of wood, brick or stone in the metropolitan areas at the 1947 Census was 6s. 7d., or 35.7 per cent., higher than the corresponding average in 1933. In the urban provincial sections the average rent was 21s. 3d. per week, or 36.4 per cent. higher than in 1933, while in the rural areas the average rent of 15s. 7d. was 35.5 per cent. higher than that at the 1933 Census.

An interesting comparison regarding the rent of private houses is that based on the average weekly rent per room. At the 1947 Census the average rent per room for wooden houses of three to six rooms in the metropolitan areas of Australia was 4s. 9d. per week, an increase of 1s. 4d. or 39 per cent. over the average of 3s. 5d. per week at the 1933 Census. Similarly, the average of 5s. 6d. per room for brick or stone houses in the metropolitan areas showed a corresponding increase of 1s. 5d. or 35 per cent.

In the urban provincial sections the average rent of 4s. 3d. per room for wooden houses was 1s. 2d., or 38 per cent., higher than the 1933 Census figure of 3s. 1d. per week, while the rent of 4s. 9d. per week for brick or stone houses was 36 per cent. higher than the previous figure of 3s. 6d. per week. The average rent per room in the rural areas also showed increases—from 2s. 6d. to 3s. 3d. per week (30 per cent.) for wooden houses, and from 2s. 7d. to 3s. 8d. per week (42 per cent.) for those of brick or stone. With the exception of brick houses in the metropolitan and rural areas, the average rent per room for houses of three rooms was generally higher than for houses of four, five or six rooms. The increase since the 1933 Census in the rent per room was somewhat similar for all houses of three to six rooms but was generally lower in the urban provincial and rural areas than in the metropolitan areas.

AVERAGE WEEKLY RENT (a) PER ROOM OF TENANTED PRIVATE HOUSES (ONE FAMILY), THREE TO SIX ROOMS, WITH WALLS OF WOOD, BRICK OR STONE, AUSTRALIA, 1933 AND 1947.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Average Weekly Rent per Room.										

(a) Rents relate to all tenanted private houses in 1933 and to tenanted private houses (one family) in 1947.

(vi) *Facilities.* At the 1947 Census, householders were asked for the first time to state whether their dwellings were supplied with electricity, gas and running water, and whether they had such facilities as a bathroom, flush toilet, laundry and cooking facilities. In addition they were asked to indicate the means of cooking mostly used.

In cases of sharing the householder was to answer the questions regarding facilities only in relation to his own dwelling. If toilet, washing and cooking facilities were shared the householder of the dwelling containing the facilities was to include those facilities on his schedule and to indicate that they were being shared by another household.

The householder of a dwelling without facilities but sharing those of another household was asked not to include the shared facilities on his schedule.

Details of the results tabulated are shown in the following table :—

**OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO FACILITIES,
AUSTRALIA, 1947.**
(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

				Number of Occupied Private Dwellings.			
Facilities.				Urban.		Rural.	Total, Australia.
				Metro- politan.	Provincial.		
Electricity—							
With				944,076	301,087	281,325	1,526,488
Without				12,556	20,998	265,906	299,460
Not Stated				4,855	3,992	38,828	47,675
Gas—							
With				815,995	124,397	22,170	962,562
Without				124,569	172,229	480,260	777,058
Not Stated				20,923	29,451	83,629	134,003
Running Water—							
With				939,634	303,235	232,862	1,475,731
Without				13,517	17,549	298,007	329,073
Not Stated				8,336	5,293	55,190	68,819
Bathroom—							
With, not shared				807,605	271,189	413,840	1,492,634
With, shared				54,678	14,470	10,885	80,033
Without				93,084	35,757	134,408	263,249
Not Stated				6,120	4,661	26,926	37,707
Flush Toilets—							
With, not shared				680,705	159,147	56,274	896,126
With, shared				48,571	9,839	2,079	60,489
Without				210,358	139,941	460,557	810,856
Not Stated				21,853	17,150	67,149	106,152
Laundry—							
With, not shared				695,982	232,109	333,108	1,261,199
With, shared				51,475	13,362	9,403	74,240
Without				187,186	68,176	198,759	454,121
Not Stated				26,844	12,430	44,789	84,063
Cooking Facilities—							
With, not shared				883,622	304,118	557,471	1,745,211
With, shared				41,894	11,854	10,524	64,272
Without				33,889	8,702	9,981	52,572
Not Stated				2,082	1,403	8,083	11,568
Means of Cooking Mostly Used—							
Electric Stove				48,847	20,913	23,057	92,817
Other Electric Appliances				16,747	5,909	6,290	28,946
Gas Stove				448,448	51,530	10,980	510,958
Other Gas Appliances				262,983	27,331	5,838	296,152
Wood, Coke or Coal Stove				133,966	203,919	499,518	837,403
Oil, Petrol or Kerosene Stove				4,819	2,332	5,059	12,210
Other means of Cooking				1,200	2,488	15,165	18,853
None				33,889	8,702	9,981	52,572
Not Stated				10,588	2,953	10,171	23,712
Total Private Dwellings				961,487	326,077	586,059	1,873,623

§ 8. Oversea Migration.

1. Oversea Migration during Present Century.—Earlier issues of the Official Year Book contain in summary form tables showing the increase of population by net migration from 1861 to the latest date, while the Demography Bulletins issued by this Bureau give this information for the individual years. On pp. 539-40 of this chapter will be found a summary showing, in quinquennial groups from 1901 to 1945 and in single years from 1939 to 1948, the increase of the population of the States due to net migration. The following table shows for Australia the arrivals and departures and the net migration since 1901:—

OVERSEA MIGRATION : AUSTRALIA.

Period.	Arrivals.			Departures.			Net Migration.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
1901-05..	196,993	84,167	281,160	204,170	93,783	297,953	- 7,177	- 9,616	- 16,793
1906-10..	251,482	119,552	371,034	213,483	100,273	313,756	37,999	19,279	57,278
1911-15(a)	422,927	209,893	632,820	382,552	113,406	495,958	40,375	96,487	136,862
1916-20(a)	438,721	100,764	539,485	390,202	78,574	468,776	48,519	22,190	70,709
1921-25..	289,695	188,357	478,052	172,236	122,550	294,786	117,459	65,807	183,266
1926-30..	266,593	203,887	470,480	193,336	147,437	340,773	73,257	56,450	129,707
1931-35..	124,207	115,116	239,323	134,883	115,326	250,209	- 10,676	- 210	- 10,886
1936-40(b)	161,774	159,538	321,312	140,901	137,283	278,184	20,873	22,235	43,128
1941-45(b)	35,422	28,503	63,925	30,097	26,019	56,116	5,325	2,484	7,809
1939(b) ..	37,719	37,366	75,085	31,491	29,703	61,194	6,228	7,663	13,891
1940(b) ..	19,296	19,307	38,603	13,998	11,205	25,203	5,298	8,102	13,400
1941(b) ..	11,861	10,800	22,661	10,063	7,414	17,477	1,798	3,386	5,184
1942(b) ..	6,295	5,971	12,266	3,059	3,041	6,100	3,236	2,930	6,166
1943(b) ..	3,931	2,194	6,125	2,822	2,032	4,854	1,109	162	1,271
1944(b) ..	4,454	3,043	7,497	5,389	4,291	9,680	- 935	- 1,248	- 2,183
1945(b) ..	8,881	6,495	15,376	8,764	9,241	18,005	117	2,746	- 2,629
1946(b) ..	17,782	17,108	34,890	23,081	26,957	50,038	- 5,299	- 9,849	- 15,148
1947(b) ..	39,865	27,903	67,768	31,289	25,868	57,157	8,576	2,035	10,611
1948(a) ..	66,321	49,402	115,723	33,797	26,811	60,608	32,524	22,591	55,115

(a) Includes movements of defence personnel.
from September, 1939, to June, 1947.

(b) Excludes movements of defence personnel

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

Net migration has varied greatly during the foregoing periods, reaching a maximum in the five years 1921-25. The 1914-18 War, during which 331,781 members of the Australian Imperial Forces embarked for service overseas, was responsible for a very large increase in the departures during the years 1914-18. Immigration increased rapidly from 1910 to 1912, the gain during the latter year being the second greatest in any one year in the present century (excluding 1919, when the troops were returning to Australia), the greatest gain being in 1949, when there was an excess of arrivals of 150,001 persons.

Owing to the depressed economic conditions in Australia the gain by migration decreased rapidly during 1928 and 1929 and there were actual losses of population during the next three years. There was little variation in the figures for arrivals and departures from 1933 to 1936, but in 1938 the arrivals exceeded the departures by 9,137 and in 1939 the excess was 13,891, the greatest gain to the population by migration since 1928. The excess of arrivals over departures in 1940 was 13,400, but with the outbreak of war in the Pacific area, the figure fell to 5,184 for 1941, 6,166 for 1942, 1,271 for 1943 and in 1944, 1945 and 1946 there were net losses by migration of 2,183, 2,629 and 15,148 persons respectively. With the resumption of immigration, net gains by migration of 10,611, 55,115 and 150,001 persons were recorded in 1947, 1948 and 1949 respectively.

The influence of the Commonwealth immigration policy is clearly reflected in the figures above. The average annual number of nominated and selected immigrants who arrived in Australia during the periods specified was as follows:—

IMMIGRATION: NUMBER OF NOMINATED AND SELECTED PERSONS.

Period.	Average Annual Number.	Year.	Recorded Number.
1901-05	Not available	1935	100
1906-10	7,945	1936	9
1911-15	30,111	1937	141
1916-20	2,326	1938	852
1921-25	23,090	1939	2,686
1926-30	19,881	1940(a)	140
1931-35	156	1947(a)	6,303
1936-40	766	1948	28,943
		Total to end of 1948	1,103,557

(a) Assisted migration was discontinued during the 1939-45 War and was not resumed until 31st March, 1947.

The number of nominated and selected immigrants reached its peak in 1926, when 31,260 arrivals were recorded. Assisted migration was discontinued for the duration of the war. For information on post-war policy see § 9 (A) following.

2. *Country of Embarkation and Disembarkation.*—The countries from which the migrants arrived or to which they departed are shown for 1947 and 1948 in *Demography Bulletin* Nos. 65 and 66 respectively. Annual averages for the period 1925-29 appear in *Official Year Book* No. 25.

3. *Racial Origin.*—The majority of migrants to and from Australia are of British race, while only a small proportion are of non-European race.

During the period 1926-30 there was such a considerable influx of Italian, Greek and Yugoslav settlers, that, despite considerable concurrent emigration they provided a large permanent addition to the population of Australia. In the following quinquennium 1931-35, there was a considerably reduced increment to the Italian population by migration whilst there was actually an excess of departures of most other races. The five years 1936-40, however, saw a resumption of immigration of Southern Europeans, while refugees were responsible for the heavy increase in net immigration of German nationals. The net movement of non-Europeans is generally small, although with the influx of considerable numbers of evacuees of non-European race a marked excess of arrivals over departures was recorded during the war period. In 1946, the first post-war year, many of these war-time evacuees were repatriated. The numbers of arrivals and departures and the net gain or loss by migration during the five years 1936-40, the year 1947 and six months ended June, 1948, classified according to racial origin, are shown in the following table. The figures should not, however, be regarded as a completely accurate record of "Racial Origin" as they are based on the passenger's own statement as to race, which in many cases may express the country of his nationality or birthplace rather than actual race. For this reason, the system of classifying the race of migrants according to individual countries has been discontinued and from July, 1948, onwards, particulars of race have been compiled only in respect of broad racial groups.

RACIAL ORIGIN OF ARRIVALS AND DEPARTURES: AUSTRALIA.

Racial Origin.	Arrivals.			Departures.			Net Migration.		
	1936-40.	1947.	Six Months ended June, 1948. (a)	1936-40.	1947.	Six Months ended June, 1948. (a)	1936-40.	1947.	Six Months ended June, 1948. (a)
American (U.S.)	10,668	2,468	1,606	10,188	1,398	955	480	1,070	651
British (b) ..	254,951	54,423	40,006	240,196	48,620	28,607	14,755	5,803	11,999
French ..	2,597	929	490	2,595	853	385	2	76	105
German (c) ..	9,676	1,072	449	2,316	795	276	7,360	277	173
Greek ..	4,400	1,482	986	921	108	133	3,479	1,374	853
Italian ..	10,519	295	633	2,869	365	300	7,650	70	333
Yugoslav ..	2,588	77	447	988	64	929	1,600	13	482
Other European	12,184	5,057	6,071	5,277	2,365	1,018	6,907	2,692	5,053
Total, European	307,583	65,803	51,288	265,350	54,568	32,603	42,233	11,235	18,685
Chinese ..	7,802	913	624	7,633	1,510	842	169	—	218
Indian ..	—	—	—	—	—	—	—	—	—
Cingalese ..	2,385	623	246	2,258	778	225	127	—	21
Japanese ..	1,712	4	3	1,739	5	11	27	—	8
Other Non-European ..	1,830	425	577	1,204	296	222	626	129	355
Total, Non-European ..	13,729	1,965	1,450	12,834	2,589	1,300	895	—	150
Total ..	321,312	67,768	52,738	278,184	57,157	33,903	43,128	10,611	18,835

(a) See par. 3 above. Comparable particulars for the last six months of 1948 are available only as follows:—Europeans—Arrivals, 61,471; departures, 25,697; net migration, 35,774. Non-Europeans—Arrivals, 1,514; departures, 1,008; net migration, 506. (b) Includes Maltese and Cypriote. (c) Includes Austrian.

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

4. **Nationality.**—The particulars of race shown in the preceding paragraph closely reflect the nationalities of migrants and, accordingly, until the discontinuation of detailed tabulations of race in July, 1948, migrants were classified as to nationality only according to the two main groups "British" and "Alien". In July, 1948, a detailed classification of migrants according to individual countries of nationality was commenced.

The following table shows particulars of the nationality of migrants for the periods covered by the preceding table relating to race:—

NATIONALITY OF ARRIVALS AND DEPARTURES: AUSTRALIA.

Nationality.	Arrivals.			Departures.			Net Migration.		
	1936-40.	1947.	1948.	1936-40.	1947.	1948.	1936-40.	1947.	1948.
British ..	261,973	55,975	89,189	254,835	50,037	53,191	16,138	5,938	35,998
Alien ..	59,339	11,793	26,534	32,349	7,120	7,417	26,990	4,673	19,117
Total ..	321,312	67,768	115,723	278,184	57,157	60,608	43,128	10,611	55,115

5. **Classes of Arrivals and Departures.**—Since 1st July, 1924, arrivals and departures have been classified according to the declared intention of the migrant in regard to residence. The figures for the five-year periods 1931-35, 1936-40 and 1941-45, and for each of the years 1946 to 1948 are as follows:—

MIGRANTS CLASSIFIED ACCORDING TO INTENDED RESIDENCE : AUSTRALIA.

Classification.	1931-35.	1936-40.	1941-45.	1946.	1947.	1948.
Permanent new arrivals ..	54,444	88,712	32,624	18,217	31,765	65,739
Australian residents returning from abroad ..	84,554	104,870	11,150	6,330	18,305	23,813
Temporary visitors ..	100,325	127,730	20,151	10,343	17,698	26,171
Total Arrivals ..	239,323	321,312	63,925	34,890	67,768	115,723
Australian residents departing permanently ..	71,670	51,006	22,399	29,806	19,579	17,271
Australian residents departing temporarily ..	79,426	94,650	9,163	6,702	18,764	19,557
Temporary visitors ..	99,108	132,528	24,554	13,530	18,814	23,780
Not Stated ..	5	..	..	..	..	..
Total Departures ..	250,209	278,184	56,116	50,038	57,157	60,608

NOTE.—The figures for permanent new arrivals include evacuees arriving in Australia during the war years as follows:—1940: 1,404 males, 3,139 females; 1941: 600 males, 1,670 females; 1942: 4,033 males, 4,105 females; 1943: 1,167 males, 591 females; 1944: 23 males, 28 females; 1945: 216 males, 133 females.

Although permanent new arrivals increased during each of the eight years prior to 1939 the number in the latter year was considerably below the annual average for the quinquennium 1926-1930. The war caused a large drop from 1940, but after the war the number rose progressively, reaching 167,727 in 1949, the highest on record. Permanent departures were far more numerous in the years 1928 to 1931 than in earlier years but they declined during each of the six years ended 1937, the number in the latter year being the lowest recorded until the outbreak of war in 1939. As in the case of arrivals, although not to the same extent, the number of Australian residents departing permanently rose rapidly after the war. Up to and including 1929 there was a considerable gain of permanent residents, but during 1930 and 1931 there was a heavy loss. The loss was very much reduced in 1932, 1933 and 1934, whilst during the five years up to and including 1939 there was a net gain in permanent residents of more than 28,000. Except for the arrival of evacuees, little movement took place during the war period, but in 1946 a net permanent loss of 11,589 persons occurred, due in large measure to the departure for the United States of America of Australian wives and children of American servicemen, and, when conditions permitted after the war, the departure of Australians to Papua and New Guinea and of large numbers of war evacuees who were returned to their home countries. Subsequently large net gains were recorded, amounting to almost 50,000 in 1948 and 150,000 in 1949.

In the table above "permanent" residence means residence of a year or more, travellers being classified under this definition according to information supplied by them at the time of arrival or departure. For various reasons the intentions of travellers are subject to subsequent modification, and the figures quoted in the table must therefore be accepted as a record of intention only.

§ 9. Immigration.

(A) Assisted Migration into Australia.

1. Joint Commonwealth and States' Scheme.—In 1920 an arrangement was arrived at between the Commonwealth and State Governments whereby the Commonwealth Government became responsible for the selection and medical inspection of British migrants from the United Kingdom, and for their transport to Australia. The State Governments advised the Commonwealth from time to time as to the numbers and classes of migrants they were prepared to receive, and became responsible for their subsequent settlement. In addition, personal and group nominations were accepted by the States, the nominators undertaking responsibility for their settlement and after-care.

In 1930, owing to the financial and industrial depression, it was decided to confine the grant of assisted passages to the wives and dependent children of men who arrived in Australia prior to 1st January, 1930.

On 4th March, 1938, the Commonwealth Government decided, in co-operation with the Government of the United Kingdom, to resume assisted migration, and provision was made for the grant of assisted passages from the United Kingdom in favour of—

- (a) persons (relatives and friends) resident in the United Kingdom nominated by individuals or approved organizations;
- (b) migrants specially requisitioned for by any State; and
- (c) persons of British stock resident in the United Kingdom, who would be in possession of—
 - (1) in the case of a married man, not less than £300 capital on arrival in Australia, or alternatively, a pension or other income of not less than £100 per annum;
 - (2) in the case of a single man not less than £50 capital on arrival.

It was also decided that the Commonwealth Government would co-operate with any State to the extent that the migration policy of that State coincided with the policy of the Commonwealth, provided that the Commonwealth would itself deal with nominations which did not fall within the ambit of the policy of any particular State, but which were acceptable under the Commonwealth policy.

2. Number of Persons Assisted.—The number of British assisted migrants for the years 1931 to 1948 inclusive, and the total from the earliest years up to the end of 1948 are given in the following table:—

IMMIGRATION : NUMBER OF PERSONS OF BRITISH ORIGIN ASSISTED.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Ausl.	Tas.	A.C.T.	Australia.
1931	76	45	43	6	99	5	1	275
1932	21	3	23	..	123	5	..	175
1933	11	3	1	1	56	..	..	72
1934	11	4	1	..	143	..	..	159
1935	1	..	1	..	98	..	..	100
1936	4	2	1	..	2	..	..	9
1937	60	33	6	3	39	..	..	141
1938	410	179	19	43	161	38	2	852
1939	1,309	544	376	126	304	24	3	2,686
1940	92	20	16	4	5	3	..	140
1947(a) ..	695	619	593	574	1,282	339	645	4,747
1948	5,146	4,787	1,982	1,707	1,577	789	255	16,243
Total from earliest years to end of 1948.. ..	353,546	261,496	238,988	118,275	89,874	26,150	972	1,089,301

(a) Assisted migration was suspended during the years 1941 to 1946. See following paragraphs.

3. *Suspension of Assisted Passage Scheme during War.*—After the outbreak of hostilities in 1939 it was decided to discontinue the grant of assisted passages for the duration of the war. Resumption of assisted migration was the subject of negotiations between the Commonwealth and United Kingdom Governments towards the end of 1945.

4. *Free and Assisted Passage Agreement, March, 1946.*—(i) *General.* An agreement was signed in March, 1946, between the Commonwealth and British Governments for free and assisted passages for British residents desirous of migrating to Australia. As from the opening date, 31st March, 1947, the Commonwealth Government undertook to accept eligible persons provided they are medically fit and otherwise regarded as suitable for settlement. Information concerning conditions and opportunities for employment is provided by the Australian High Commissioner for the guidance of all prospective settlers. Expenses incurred in the selection of applicants are borne by the Commonwealth Government, which has also undertaken to provide free transportation from the port of disembarkation to the ultimate destination in Australia, and temporary accommodation for a limited period wherever necessary. In this connexion, the Commonwealth has undertaken to make adequate administrative arrangements with the States in regard to the reception, placement and aftercare of all migrants upon arrival, and to secure the co-operation of approved voluntary organizations.

Substantial rights, including health, medical services, sickness and unemployment benefits, maternity allowances and child endowment under the Australian Social Security Services Scheme are extended to settlers as from the date of arrival; but it has not been possible to extend employment preference to British ex-servicemen and women. Prospective settlers will not, however, be granted passages unless there is a reasonable assurance that they will obtain employment on arrival.

Any adult resident of Australia may nominate for free or assisted passages friends or relatives resident in the United Kingdom who are eligible for consideration.

(ii) *Free Passages.* This part of the scheme is financed by the United Kingdom Government as part of its re-settlement programme. Persons eligible for consideration are British ex-servicemen and women, together with their dependants, if they were resident in the British Isles on 1st September, 1938, or were in the United Kingdom Forces overseas on that date and subsequently served in a full-time capacity in the Armed Forces or Merchant Navy of the United Kingdom during any period after 25th May, 1939.

Applications under the scheme can only be considered if they are made and lodged within two years from 31st March, 1947 (the date on which the scheme came into operation) or within two years from the date of release from the Forces, whichever is the later, provided that in all cases the date of release was on or before 31st December, 1948.

(iii) *Assisted Passages.* Assisted passages are granted under the Empire Settlement Acts of the United Kingdom to suitable British subjects normally resident in the United Kingdom and who do not come within the scope of (ii) above. However, the Commonwealth normally is not prepared to accept single persons or married persons without children if they have reached their forty-sixth birthday before the date of sailing. However, if otherwise acceptable under the scheme, the parents or close relatives of intending migrants or of persons established in Australia may be granted passages irrespective of age.

Each settler, male or female, of 19 years of age and over is required to contribute £10 (English currency) towards the cost of a passage, and each juvenile of 14 years, but not more than 18 years, £5 (English currency). Children under 14 years of age travel free. The cost of the latter and the remainder of the cost of the others is borne equally by the two Governments up to a basic passage rate of £75 (English currency), any excess being met by the Commonwealth. A migrant not remaining in Australia for a minimum of two years is liable for repayment of the amount of free grant.

5. **Assisted Passage Scheme, Eire.**—In November, 1948, the Commonwealth Government approved a scheme for the granting of limited financial assistance to natural born citizens of Eire normally residing in the British Isles, or natural born British citizens residing in Eire, who wish to emigrate to Australia and who are selected as suitable for settlement here. This scheme, however, only applies to prospective new settlers and their dependants who are not eligible for free or assisted passages under the schemes agreed to with the United Kingdom Government (*see* para. 4 above).

The maximum amount of assistance granted toward an adult passage is £30 sterling, with varying amounts for children according to age.

It is not essential for an applicant to have been nominated by a friend or relative in Australia before being considered for financial assistance under the scheme. Single men, or women, may be accepted, but owing to the acute difficulty of finding accommodation for family units, families are, at present, only being accepted if they have nominators in Australia able to accommodate them or if they can make arrangements regarding accommodation before arrival.

6. **Maltese Migration.**—On 31st May, 1948, the Commonwealth Government entered into an agreement with the Government of Malta under which assistance to travel to Australia is jointly given by the two Governments to selected settlers from Malta. The maximum contribution by the Commonwealth is £30 sterling in the case of an adult's passage money, and is subject to the Government of Malta contributing not less than a like amount.

Persons already established in Australia may nominate individual Maltese under this scheme and nominations for groups of migrants may be submitted by prospective employers or by organizations. In either case, the nominator undertakes to provide accommodation and, in the case of group nominations, employment.

The Commonwealth retains the right of final selection of all migrants under the scheme including group and personal nominees. The Government of Malta has undertaken to attend to after-care of Maltese migrants arriving under this scheme.

Maltese settlers who arrived under this scheme during 1948 totalled 547.

7. **Empire and Allied Ex-Servicemen's Scheme.**—With the principal object of giving servicemen of Empire and Allied countries who had served in Australia during the recent war an opportunity to return here for permanent settlement, the Australian Government on 26th May, 1947, initiated a scheme of financial assistance toward the cost of the passages to Australia of eligible Empire ex-servicemen not covered by the United Kingdom-Australia Free and Assisted Passage Agreement, and ex-Servicemen of the United States of America and their immediate dependants. The maximum amount of assistance granted toward an adult passage is £30 sterling with varying amounts for children according to age.

The scheme was later extended to provide similar assistance to ex-Servicemen and former members of the Resistance movements of the following countries:—Holland, Norway, Belgium, France and Denmark with their dependants. The nationalities of the 1,439 migrants who arrived in Australia under this scheme during the years 1947 and 1948 were 1,345 United States of America, 73 British, 20 Dutch and 1 French.

8. **Dutch Migration Agreement.**—An agreement was made in December, 1946, between the Commonwealth Government and the Netherlands Emigration Foundation, which is sponsored by the Netherlands Government, for the introduction of migrants from Holland. The agreement provides for the admission of Dutch settlers who are required to possess a very much smaller amount of landing money than is usually required of foreign migrants. The Netherlands authorities are responsible for providing shipping for these migrants. The Netherlands Emigration Foundation has appointed a representative in Australia to attend to the reception, placement in employment and after-care of migrants arriving under this agreement.

Due to the lack of shipping available the number of migrants who settled in Australia under this agreement to the end of 1948 was 40 only.

9. **Migration of Former European Displaced Persons.**—On 21st July, 1947, the Commonwealth Government entered into an agreement with the International Refugee Organization covering the resettlement in Australia of European displaced persons who are under the protection of that body.

Under this agreement, the International Refugee Organization undertook responsibility for provision of transport and the care of the displaced persons until their disembarkation in Australia. The Commonwealth undertook selection in Europe and responsibility for reception in Australia, placement in employment and after-care after arrival. The Commonwealth also undertook to make an *ex gratia* payment to the International Refugee Organization of £10 sterling per person towards the cost of travel of each adult migrant carried under the agreement.

Eligibility for selection is based on similar standards of age, physical fitness and general suitability of settlement as apply under other schemes of encouraged migration operated by the Commonwealth. There is no restriction on the nationality of migrants selected, the only limiting factor in this regard is that applicants must be displaced persons within the definition accepted by the International Refugee Organization.

All applicants under this scheme enter into an undertaking to remain in the employment found for them by the Commonwealth for a period of two years from the date of their arrival and their admission into the Commonwealth is subject to their observing this undertaking. On completion of this period, these migrants may be granted indefinite admission to the Commonwealth. Except for this one provision in respect to employment, migrants arriving under this scheme are in the same position as other foreign migrants admitted to the Commonwealth, and are eligible to receive health and medical service benefits, sickness and unemployment benefit, maternity allowance and child endowment.

In order to ensure suitable arrangements for the reception of these migrants and their absorption into the community, the Commonwealth has set up Reception and Training Centres at Bathurst in New South Wales and Bonegilla in Victoria. At these Centres migrants are medically examined and X-rayed (to reveal any disabilities which may have developed since the medical examination at the time of selection) and interviewed individually to assess their employment potential. During the period of their stay in Reception and Training Centres, which is usually three or four weeks, they are given a course of instruction in utilitarian English and the Australian way of life, and are paid a special social service benefit from which an amount is deducted towards the cost of their upkeep, leaving them 5s. per week for incidental expenditure. To cope with the planned increase in the numbers arriving during 1949, additional Reception and Training Centres were established at Greta, New South Wales, Woodside, South Australia and Graylands and Northam in Western Australia.

At the end of this training period, breadwinners amongst the arrivals are placed in employment where employer-found accommodation near the job is available. In cases where there is no accommodation near the job available for the breadwinner's dependants they, instead of accompanying him to the job, are provided with accommodation at the breadwinner's expense in specially established Immigration Dependents' Holding Centres until such time as he is able to find other accommodation for them. These Holding Centres have been or are being established in all States; generally former Service Camps have been adapted for the purpose.

Priority in employment placements is given to essential industries which are experiencing difficulties in obtaining adequate supplies of Australian labour, and particularly those industries associated with the supply of building materials, such as the timber industry, the clay products industry and the cement industry. In some cases, Workers' Hostels have been established by the Commonwealth Government to accommodate migrant workers in these and similar industries. Priority is also given to road and rail construction and to water and sewerage undertakings associated with housing projects.

Single women and married women without children are, for the most part, employed as nurses, nurses' assistants and as domestics in hospitals and private homes.

The number of migrants who arrived to the end of 1948 under this scheme is as follows:—1947, 840 and 1948, 9,953.

Limitations of shipping restricted the numbers received up to the end of 1948 but, with shipping becoming more freely available to the International Refugee Organization, a large proportion of the 100,000 migrants Australia agreed to take under the scheme by June, 1950 arrived during 1949.

(B) The Regulation of Immigration into Australia.

1. Powers and Legislation of the Commonwealth.—(i) *Constitutional.* Under Section 51, xxvii. and xxviii. of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals.

(ii) *Legislation.* A summary of the provisions of the Immigration Act 1901-1925 and the Contract Immigrants Act 1905 (except the provisions of the Amending Immigration Acts of 1920, 1924 and 1925, which will be found in Official Year Book No. 21, p. 927), containing particulars regarding the admission of immigrants, prohibited immigrants, the liabilities of shipmasters and others, and kindred matters will be found in preceding issues of the Official Year Book (*see* No. 12, pp. 1166-8).

The Immigration Act 1930.—Under this Act it is provided that Section 5, subsection (1) of the Immigration Act 1901-1925 applies to any person, who, since the commencement of the Immigration Restriction Act 1901, evaded an officer when entering Australia, or gained admission or re-admission by fraudulent means. Steps can be taken to deal with such persons as prohibited immigrants at any time after they have landed in Australia.

The Immigration Act 1932.—This Act provides (a) that any alien who fails to satisfy an officer that he holds a landing permit, or that his admission has been authorized, may be prohibited from landing; (b) for the increase from three to five years of the period during which a person may be declared a prohibited immigrant; (c) that a person not a British subject and who has been convicted of a crime of violence against the person may be deported pursuant to an order of the Minister without his being subjected to a dictation test; (d) for the deportation of a person who has been convicted of a criminal offence or who has become an inmate of an insane asylum or public charitable institution within five years from the date of arrival instead of three years as hitherto; and (e) that where the wife of a person whom it is proposed to deport so desires, her name and the names of her dependent children may be included in her husband's deportation order. This would of course apply only to wives and children who were themselves immigrants.

The Immigration Act 1933.—This Act provides that Section 8A, as amended by the Immigration Act 1932—*see* (d) above—shall apply to persons who arrived in Australia since the commencement of the Section, i.e., since 2nd December, 1920. It also makes statutory provision for the taking of securities for compliance with the provisions of the Act.

The Immigration Act 1935.—The main purpose of this Act was to add a penalty clause to Section 5 of the principal Act, to overcome a legal difficulty which had arisen in regard to relying on Section 7 for the imposition of penalties on persons convicted under Section 5 on charges of being prohibited immigrants offending against the Act.

The Immigration Act 1940.—This Act provides (a) that the holder of a landing permit shall on demand satisfy an officer that he is able to comply with the conditions specified in the permit; (b) for the issue of, and extensions of, certificates of exemption; (c) that a non-British person who is convicted of a crime of violence against the person or of extorting any money or thing by force or threat, or of any attempt to commit such a crime or who is convicted of any other criminal offence for which he is sentenced to imprisonment for one year or longer may be deported; (d) for the exercise of discretion by the Minister in enforcing an order for the deportation of a person; and (e) for the provision and enforcement of maintenance guarantees in relation to persons seeking to enter Australia.

The Immigration Act 1948.—The main purpose of this Act is to provide for the registration of persons acting as agents in respect of (a) applications for the admission of intending immigrants to Australia; and (b) arranging or securing passages for intending migrants. The Act provides that only registered agents shall be permitted to receive fees for such services and it prescribes the charges which agents may make in return for their services.

The Immigration Act 1949.—This Act provides for the amendment of Section 4 of the Principal Act in relation to the grant of certificates of exemption. The object of the Act is to revalidate certificates which had become invalid following on a High Court decision.

The Aliens Deportation Act 1948.—This Act repeals the Aliens Deportation Act 1946 and empowers the Minister for Immigration to order the deportation of an alien who after investigation by a Commissioner is reported as not being a fit and proper person to be allowed to remain in Australia.

The War-time Refugees Removal Act 1949.—The purpose of the Act is to enable the Minister for Immigration to effect the repatriation to their own countries of persons given refuge in Australia during the war.

2. **Conditions of Immigration into Australia.**—(i) *Immigration of Non-European Persons.* In pursuance of the established policy, the general practice is not to permit Asiatics or other coloured immigrants to enter Australia for the purpose of settling permanently.

Special arrangements were made with India, Japan, China and other Eastern countries under which facilities were afforded for subjects of those countries who were bone fide merchants, students, or tourists to enter and remain in Australia under exemptions whilst they retained their status. Permission is also given for nationals of these countries to enter Australia as assistants or substitutes for local traders domiciled in Australia. Such persons are permitted to remain so long as they retain their status as such.

(ii) *Immigration of White Aliens.* Aliens seeking to enter Australia for permanent residence are required to obtain landing permits or special authority for admission from the Department of Immigration.

The present immigration policy provides for the admission of aliens, apart from German nationals, whose maintenance and accommodation have been guaranteed by persons resident in Australia.

The admission of Germans is at present confined to the following classes :—(a) wives, children, parents and other close relatives of persons resident in Australia; and (b) those who may have suffered persecution during the war on religious or political grounds.

(iii) *General Information.* General information as to conditions of entry into Australia may be obtained from the following officers :—

- (a) In Australia: The Secretary, Department of Immigration, Canberra, A.C.T.;
- (b) In Great Britain: the Official Secretary, High Commissioner's Office, Australia House, Strand, London;
- (c) in other British Dominions: the High Commissioner for Australia;
- (d) in other countries where Australia is represented: the Secretary, Australian Legation.

For details of the Dominions and countries included see the section entitled "Diplomatic and other Representatives Overseas and in Australia" in Chapter XXVIII.

3. **Nationality or Race of Persons Arriving.**—The following table shows the number of persons who arrived in Australia during the year 1947 and the six months ended June, 1948 according to their "nationality or race." For explanation of the data supplied under this definition and of the institution of a new detailed classification of migrants according to individual countries of nationality see pars. 3 and 4, pages 573-4.

NATIONALITY OR RACE OF PERSONS ARRIVING: AUSTRALIA, 1947 AND SIX MONTHS, 1948.

Nationality or Race.	1947.	Six Months ended June, 1948. (a)	Nationality or Race.	1947.	Six Months ended June, 1948. (a)
EUROPEAN—			EUROPEAN—continued,		
Albanian	19	31	Swedish	83	52
American, United States	2,468	1,606	Swiss	107	92
Austrian	418	162	Yugoslav	78	447
Belgian	63	54	Other European	290	665
British	54,423	40,606	ASIATIC—		
Bulgarian	6	13	Chinese	913	624
Czechoslovak	159	192	Egyptian	24	97
Danish	131	137	Filipino	41	21
Dutch	596	477	Indian and Cingalese	623	246
Estonian	182	721	Javanese, Koepanger, Timorese	32	19
Finnish	16	12	Malayan	49	85
French	929	490	Palestinian	55	129
German	654	287	Siamese (Thai)	20	17
Greek	1,482	986	Syrian, Lebanese	56	94
Hungarian	375	187	Other Asiatic	56	15
Italian	295	633	OTHER—		
Latvian	271	1,042	Fijian	10	24
Lithuanian	464	831	Papuan	35	12
Norwegian	78	48	Polynesian, Melanesian, etc.	21	28
Polish	1,698	1,096	Other	30	39
Portuguese	20	3			
Rumanian	91	104			
Russian	357	299			
South American	25	9			
Spanish	25	6			
			Total	67,768	52,738

(a) See pars. 3 and 4, pages 573-4.

4. Departures of Persons of Non-European Races.—The number of persons of non-European race who left Australia during 1947 and the six months ended June, 1948 were 2,589 and 1,300 respectively, distributed among the various nationalities as follows (1947 figures shown in parentheses):—Chinese, 842 (1,510); Indians and Cingalese, 225 (778); Other Asiatics, 158 (248); Papuans, nil (9); Polynesian, Melanesian, etc., 46 (5); Other 29 (39).

(C) Passports.

Provision is made in the Immigration Act 1901-1949 for the production of a passport by each person over 16 years of age who desires to enter Australia. Under the Passports Act 1920, it was compulsory also for each person over 16 years of age to be in possession of a passport or other document authorizing his departure. This Act has now been superseded by the Passports Act 1938, which repealed the compulsory provisions and is now simply a machinery measure governing the issue of passports and the grant of other passport facilities. The Act extends to the Territories of Australia, including Papua, Norfolk Island and the Trust Territory of New Guinea.

Although not compulsory under the 1938 Act to be in possession of a passport when leaving Australia, it is very desirable in their own interests that Australians proceeding abroad should provide themselves with a passport as a means of establishing their

identity and nationality. The possession of a passport is necessary for admission into most countries overseas, and the holder of an Australian passport also has no difficulty in landing on return to Australia. The charge for an Australian passport is £1, for an ordinary visa 8s. and for a transit visa, 2s.

As a consequence of the passing of the Nationality and Citizenship Act 1948 (*see below*—§ 10), two types of Australian passports are now issued in Australia to persons travelling in a private capacity, one type being issued to Australian citizens ("C Series") and the other to British subjects who have not acquired Australian citizenship ("B Series"). The latter type are to be issued only until such time as each British Commonwealth country has enacted citizenship legislation and has authorized her own representative in Australia to issue passports to her own citizens. Australian citizens abroad may now secure passports only from Australian representatives.

In addition to "B" and "C" Series passports, Diplomatic and Official passports are now issued to members of the Australian diplomatic service and other Government officials proceeding abroad on official business.

Applicants for passports are required to produce evidence of their identity and nationality (e.g. Birth Certificates).

§ 10. Citizenship and Naturalization.

1. Commonwealth Legislation.—The Nationality and Citizenship Act 1948 commenced on Australia Day (26th January), 1949, and repealed all previous Commonwealth legislation on this subject. The most significant effect of the Act was the creation for the first time of the status of "Australian Citizen". In this respect the Act was complementary to citizenship legislation passed or about to be passed by other countries of the British Commonwealth. All Australian citizens, and the citizens of other countries of the British Commonwealth, are deemed to be British subjects. Australian citizenship was automatically acquired as from 26th January, 1949, by persons who were British subjects at that date and who either (a) were born in Australia or New Guinea; or (b) were naturalized in Australia; or (c) had been residing in Australia during the five years immediately preceding 26th January, 1949; or (d) were born outside Australia of fathers to whom (a) or (b) above applied (provided the persons concerned had entered Australia without being placed under any immigration restriction); or (e) were women who had been married to men who became Australian citizens under the above headings (provided that the women concerned had entered Australia without being placed under immigration restriction).

After the Act's commencement citizenship may be acquired in the following ways:—(a) by birth in Australia; (b) by birth outside Australia, of a father who is an Australian citizen, provided that the birth is registered at an Australian Consulate; (c) by registration. Certificates of Registration as Australian citizens may be granted by the Minister to British Subjects or Irish citizens who make application and satisfy the Minister that they can comply with specified requirements as to residence in Australia, good character and intention to reside permanently in Australia; (d) by naturalization. Certificates of Naturalization as Australian citizens may be granted by the Minister to aliens who make application and can comply with requirements somewhat similar to those previously required under the Nationality Act 1920–1946. New requirements for naturalization are—(i) a Declaration of Intention to apply must be lodged at least two years before the final application; (ii) five years residence in Australia is required; (iii) applicants must have an adequate knowledge of the responsibilities and privileges of citizenship; (iv) Certificates do not take effect until the applicant takes the Oath of Allegiance. The Oath is now taken in open Court, where the Judge or Magistrate addresses the applicant upon the responsibilities and privileges of citizenship before the Oath is administered and the Certificate of Naturalization delivered to the applicant.

Under the Act, the independence of married women in nationality matters is recognized, and British nationality is restored to those women who had lost it through marriage to aliens. In future, marriage will not affect a woman's nationality. Alien women who marry Australian citizens may, however, be naturalized under somewhat easier conditions than those which apply to other aliens.

2. **Certificates Granted.**—(i) *Australia.* The following figures relate to certificates issued under the Nationality Act 1920-1946 during the years 1947 and 1948 :—

NATURALIZATION : CERTIFICATES GRANTED, 1947 AND 1948.

PREVIOUS NATIONALITIES OF RECIPIENTS.

Nationality.	Certificates Granted.		Nationality.	Certificates Granted.	
	1947.	1948.		1947.	1948.
Albanian	50	45	Latvian	1	7
American, United States ..	21	28	Lebanese	19	24
Austrian	68	86	Norwegian	21	20
Belgian	2	3	Palestinian	10	13
Bulgarian	32	17	Polish	126	82
Czechoslovak	46	41	Rumanian	4	3
Danish	12	19	Russian	20	11
Dutch	22	21	Spanish	10	17
Estonian	25	25	Swedish	18	17
Finnish	25	37	Swiss	14	15
French	11	10	Syrian	5	7
German	195	250	Yugoslav	83	65
Greek	445	298	Stateless	156	91
Hungarian	11	9	Other	10	11
Iraqi	2	1			
Italian	1,277	856	Total	2,741	2,129

COUNTRIES IN WHICH RECIPIENTS ORDINARILY RESIDED IMMEDIATELY BEFORE ENTERING AUSTRALIA OR NEW GUINEA.

Country.	Certificates Granted.		Country.	Certificates Granted.	
	1947.	1948.		1947.	1948.
Albania	42	47	Mexico .. ..	..	1
Argentina	5	2	Netherlands East Indies ..	9	7
Austria	21	18	New Caledonia .. ..	..	5
Belgium	7	6	New Zealand	9	11
Brazil	1	1	Norway	13	13
Bulgaria	27	14	Noumea	2	1
Canada	7	6	Palestine	31	79
Cuba .. ..	..	2	Panama	2	1
Czechoslovakia	26	22	Peru .. ..	..	1
Denmark	7	11	Poland	78	62
Dodecanese Islands .. ..	..	10	Portugal	1	1
Egypt	30	14	Rumania	2	5
England	168	115	Russia	7	9
Estonia	18	23	South America	9	10
Finland	21	31	Spain	2	10
France	26	15	Sweden	11	13
Germany	162	134	Switzerland	13	14
Greece	433	293	Syria	6	6
Holland	20	16	Turkey	3	..
Hungary	6	2	United States of America ..	33	41
Iran	27	69	Uruguay	1	1
Iraq	2	2	Yugoslavia	82	63
Italy	1,261	828	Other	91	70
Latvia .. ..	..	3			
Lebanon	16	21			
Lithuania	3	..	Total	2,741	2,129

(ii) *States.* The certificates of naturalization granted in 1948 (1947 figures in parentheses) were issued in respect of residents of the various States and Territories as follows:—New South Wales, 627 (865); Victoria, 742 (842); Queensland, 343 (421); South Australia, 188 (225); Western Australia, 195 (348); Tasmania, 12 (11); Northern Territory, 3 (8); Australian Capital Territory, 13 (17); and New Guinea, 6 (4); Total, 2,129 (2,741).

§ 11. Population of Territories.

At the Census of 30th June, 1947, arrangements were made to obtain complete information concerning not only the two internal territories of Australia—Northern Territory and Australian Capital Territory—but also the external Territories under the control of Australia, namely:—Norfolk Island; Papua; Trust Territory of New Guinea; and Trust Territory of Nauru.

Figures respecting population and number of dwellings in each Territory at the Census of 1947 are summarized in the following table:—

POPULATION AND DWELLINGS: TERRITORIES, 30th JUNE, 1947.

(EXCLUDING INDIGENOUS POPULATION.)

Territory.	Population.			Dwellings.			
	Males.	Females.	Persons.	Occu- pied.	Unoccu- pied.	Being Built.	Total.
Northern Territory ..	7,378	3,490	10,868	2,705	34	22	2,761
Australian Capital Territory	9,092	7,813	16,905	3,020	52	316	3,988
Norfolk Island ..	505	433	938	279	43	5	327
Papua (a) ..	2,057	1,182	3,239	769	(b)	(b)	(b)
Trust Territory of New Guinea (a) ..	4,369	1,831	6,200	1,391	(b)	(b)	(b)
Trust Territory of Nauru ..	1,413	63	1,476	54	9	10	73

(a) Includes temporary dwellings constructed of iron, sisalcraft, native materials, canvas, etc., in war-devastated areas.

(b) Not available.

Particulars concerning the indigenous populations of these Territories are included in Chapter X.—“The Territories of Australia”.

§ 12. The Aboriginal Population of Australia.

In Official Year Book No. 17, pp. 951–61, a brief account is given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. On pp. 914–16 of Official Year Book No. 22, particulars are shown for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the continent appears on pp. 687–96 of Official Year Book No. 23.

The aborigines are scattered over the whole of the mainland, but the majority are concentrated in Western Australia, Queensland and the Northern Territory. At a Census of aborigines taken on 30th June, 1944, in all States except New South Wales, the following particulars were disclosed :—

ABORIGINAL CENSUS, 30th JUNE, 1944.

State or Territory.	Full-blood.					Half-caste.					Total, Full-blood and Half-caste.
	Noma-dic.	In Em-ploy-ment.	In Super-vised Camps. (a)	Other.	Total.	Noma-dic.	In Em-ploy-ment.	In Super-vised Camps. (a)	Other.	Total.	
New South Wales & Victoria ..	40 6	112 14	314 6	128 3	594 29	505 80	2,057 230	3,403 150	4,057 465	10,022 925	10,616 954
Queensland (c) ..	931	3,144	2,782	1,122	7,979	84	2,083	1,487	1,892	5,546	13,523
South Australia ..	1,399	484	667	318	2,868	493	409	970	336	2,208	5,076
Western Australia ..	14,553	4,966	2,118	573	22,210	276	2,872	1,001	733	4,882	27,092
Tasmania ..	..	2	..	..	2	..	124	..	251	375	377
Northern Territory ..	4,735	2,965	5,631	..	13,331	..	349	226	247	822	14,153
Australian Capital Territory ..	..	..	1	..	1	..	26	75	..	101	102
Australia ..	21,664	11,687	11,519	2,144	47,014	1,438	8,150	7,312	7,981	24,881	71,895

(a) This figure does not include those living in supervised camps who were in regular employment. (b) At 30th June, 1941. (c) Excludes Torres Strait Islanders (1,064 in regular employment, 2,754 in supervised camps, and 82 other).

CHAPTER XIV.

VITAL STATISTICS.

NOTE.—1. In the Vital Statistics chapter of Official Year Book No. 36, tables covered 1941 and, where possible, 1942 and 1943. In the last issue these tables covered 1946 and, where possible, 1945. In the present issue these tables cover 1948 and, where possible, 1947. In some cases, however, space does not permit of the inclusion of figures for 1947. These figures will be found in *Demography Bulletin* No. 65 unless otherwise specifically indicated.

2. Figures for Australia throughout are exclusive of full-blood aboriginals.

§ 1. Marriages.

1. Number, 1948.—The number of marriages registered in Australia during the year ended 31st December, 1948, was 74,902, giving a rate of 9.71 per 1,000 of the mean population for the year. In 1942 both the number and the rate were the highest on record. A summary of the number of marriages registered in each State and Territory since 1861 is given in the following table:—

MARRIAGES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.	
Annual Average—										
1861-1865	3,384	4,447	738	1,245	153	668	..	..	10,635
1866-1870	3,654	4,580	930	1,287	164	629	..	..	11,244
1871-1875	4,242	4,874	1,255	1,494	167	658	..	..	12,600
1876-1880	5,181	5,083	1,493	2,137	196	817	..	..	14,907
1881-1885	7,148	6,718	2,326	2,476	223	1,000	..	..	19,891
1886-1890	7,730	8,567	3,054	2,067	299	959	..	..	22,676
1891-1895	7,985	7,543	2,705	2,142	466	905	..	..	21,746
1896-1900	9,094	7,852	3,102	2,190	1,572	1,098	..	..	24,908
1901-1905	10,435	8,294	3,154	2,412	2,024	1,342	(a) 7	..	27,668	
1906-1910	12,742	9,502	4,203	3,159	2,098	1,446	10	..	33,160	
1911-1915	16,741	11,762	5,696	4,032	2,552	1,549	16	(b) 4	42,352	
1916-1920	15,744	11,321	5,397	3,756	2,145	1,443	27	5	39,838	
1921-1925	18,041	13,293	6,072	4,200	2,564	1,594	14	4	45,782	
1926-1930	19,253	12,955	6,279	4,036	3,167	1,506	23	30	47,249	
1931-1935	18,742	12,773	6,950	3,967	3,328	1,638	29	53	47,480	
1936-1940	25,295	17,784	8,982	5,726	4,399	2,187	83	85	64,541	
1941-1945	28,506	19,450	10,563	6,517	4,668	2,097	71	109	71,981	
Year—										
1944	..	26,426	17,857	11,325	6,019	4,506	1,935	31	102	68,201
1945	..	25,283	16,501	9,905	5,321	3,788	1,868	48	108	62,822
1946	..	31,684	21,405	11,666	6,700	5,171	2,650	63	157	79,496
1947	..	30,172	20,437	10,999	6,668	5,282	2,584	124	191	76,457
1948	..	30,164	20,035	10,125	6,704	5,186	2,428	110	150	74,902

(a) Included with South Australia prior to 1901.

(b) Part of New South Wales prior to 1911.

2. *Crude Marriage-rates.*—The crude marriage-rates for each State and Territory for a series of years are given hereunder:—

CRUDE MARRIAGE-RATES.(a)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Annual Average—									
1861-1865	9.05	7.86	13.32	8.83	8.44	7.35	..	..	8.54
1866-1870	8.06	6.90	9.21	7.39	6.97	6.44	..	..	7.43
1871-1875	7.79	6.37	9.11	7.61	6.43	6.38	..	..	7.16
1876-1880	7.84	6.17	7.68	8.73	6.89	7.51	..	..	7.23
1881-1885	8.55	7.41	8.82	8.36	6.98	8.19	..	..	8.10
1886-1890	7.53	8.15	8.55	6.65	6.96	7.03	..	..	7.75
1891-1895	6.71	6.46	6.52	6.35	7.07	6.00	..	..	6.54
1896-1900	6.95	6.63	6.60	6.16	10.11	6.61	..	..	6.84
1901-1905	7.38	6.89	6.12	6.76	9.30	7.50	11.69	..	7.10
1906-1910	8.10	7.63	7.50	8.32	8.06	7.71	2.68	..	7.88
1911-1915	9.32	8.48	8.69	9.32	8.26	8.00	4.41	12.04	8.86
1916-1920	8.05	7.80	7.62	8.17	6.76	7.17	5.08	1.94	7.25
1921-1925	8.20	8.29	7.62	8.14	7.28	7.40	3.81	1.06	8.04
1926-1930	7.87	7.43	7.11	7.13	7.80	6.96	5.05	3.80	7.53
1931-1935 ^d	7.19	7.01	7.34	6.83	7.57	7.19	5.90	5.70	7.16
1936-1940 ^d	9.28	9.50	8.95	9.64	9.49	9.25	12.72	7.14	9.33
1941-1945 ^d	9.99	9.87	10.05	10.63	9.75	8.61	7.13	7.57	9.95
Year—									
1944 ^(d)	..	9.10	8.97	9.72	9.36	7.88	2.97	7.18	9.33
1945 ^(d)	..	8.67	8.22	8.49	7.77	7.51	4.57	7.19	8.50
1946 ^(d)	..	10.76	10.57	10.70	10.55	10.49	10.51	9.88	10.65
1947 ^(d)	..	10.11	9.95	9.95	10.32	10.50	10.02	11.39	10.09
1948	..	9.96	9.59	9.01	10.18	10.07	9.18	8.25	9.71

(a) Number of marriages (not persons married) per 1,000 of mean population. South Australia prior to 1901. (c) Part of New South Wales prior to 1911. accordance with the final results of the Census of 30th June, 1947.

(b) Included with (c) Part of New South Wales prior to 1911. (d) Revised in accordance with the final results of the Census of 30th June, 1947.

As the marriage-rates in some international tabulations are based on the unmarried population aged 15 years and over, the corresponding rates have been calculated for Australia for the last seven census periods. The period in each case comprises the census year with the year immediately preceding and the year immediately following, and the figures are as follows:—1880-82, 48.98; 1890-92, 45.74; 1900-02, 42.14; 1910-12, 50.44; 1920-22, 56.22; 1932-34, 42.88; and 1946-48, 71.33. These rates refer, of course, to persons married, and not, as in the case in the preceding table, to marriages.

3. *Crude Marriage-rates of Various Countries.*—The following table gives the crude marriage-rates for Australia and each State thereof in comparison with the rates for various other countries.

CRUDE MARRIAGE-RATES (a) : VARIOUS COUNTRIES.

Country.	1908-13.	1921-25.	1926-30.	1931-35.	1948.
United States of America	(b)	10.6	9.9	9.2	12.5
Germany	7.8	9.4	8.7	9.3	(c) 11.2
Union of South Africa (d)	(b)	8.0	9.3	9.4	(e) 10.8
Czechoslovakia	7.7	10.0	9.3	8.2	10.6
Hungary	(b)	10.0	9.2	8.5	10.4
New Zealand (f)	8.5	8.0	7.7	7.3	9.9
Australia (g)	8.4	8.1	7.6	7.2	9.7
<i>South Australia (g)</i>	9.1	8.1	7.0	6.8	10.2
<i>Western Australia (g)</i>	8.1	7.3	8.0	7.6	10.1
<i>New South Wales (g)</i>	8.8	8.2	8.0	7.2	10.0
<i>Victoria (g)</i>	8.0	8.3	7.4	7.0	9.6
<i>Tasmania (g)</i>	7.9	7.4	7.1	7.2	9.2
<i>Queensland (g)</i>	8.2	7.5	6.9	7.3	9.0
Canada	(b)	7.3	7.3	6.4	9.6
Rumania	9.5	10.4	9.4	9.0	9.4
Denmark	7.3	7.9	7.8	8.7	9.4
Belgium	7.9	10.6	9.1	7.8	9.2
Norway	6.2	6.3	6.1	6.5	9.2
Netherlands	7.5	8.2	7.7	7.2	9.0
France	7.9	9.5	8.2	7.4	8.9
Great Britain and Northern Ireland ..	7.3	7.7	7.5	7.9	8.9
<i>England and Wales</i>	7.6	7.8	7.7	8.1	9.0
<i>Scotland</i>	6.7	7.1	6.7	7.1	8.5
<i>Northern Ireland</i>	5.2	6.2	5.9	6.2	(h) 7.1
Switzerland	7.3	7.7	7.5	7.7	8.5
Argentina	6.8	7.2	7.4	6.5	(i) 8.4
Italy	7.7	9.0	7.3	6.8	8.3
Chile	(b)	6.9	9.3	6.9	8.3
Sweden	6.0	6.3	6.7	7.3	8.2
Poland	7.0	9.9	9.2	8.4	(j) 8.1
Finland	6.1	7.1	7.2	7.2	(i) 8.0
Yugoslavia	(b)	10.6	9.5	7.8	(f) 7.9
Portugal	6.9	7.9	6.9	6.6	7.7
Spain	7.0	7.3	7.3	6.5	7.7
Japan	9.3	8.8	8.0	7.6	(j) 7.5
Greece	(b)	7.5	7.1	6.8	(j) 6.5
Mexico	(b)	(b)	(b)	6.1	5.9
Eire	5.2	4.9	4.6	4.6	5.4

(a) Number of marriages per 1,000 of mean population. (b) Not available. (c) 1939.
 (d) White population only. (e) 1943. (f) Excludes Maoris. (g) Excludes full-blood
 aborigines. (h) 1947. (i) 1944. (j) 1938.

4. Age and Conjugal Condition at Marriage.—(i) *General.* Age at marriage in single ages and previous conjugal condition of bridegrooms and brides in 1947 and 1948 will be found in *Demography Bulletins* Nos. 65 and 66. A summary in age-groups is given hereunder for these years. There were 4,722 males aged less than twenty-one years married during 1948 while the corresponding number of females was 20,544. At the other extreme there were 95 bachelors and 33 spinsters in the age-group 65 years and over.

Information regarding the percentage distribution of bridegrooms and brides is shown for 1907-10, in five-year periods thereafter until 1945 and for each of the years 1946, 1947 and 1948.

AGE AND CONJUGAL CONDITION OF PERSONS MARRIED: AUSTRALIA.

Age at Marriage (Years).	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
1947.								
Under 20..	1,920	..	..	1,920	13,406	6	13	13,425
20-24 ..	30,425	26	102	30,553	35,251	170	508	35,929
25-29 ..	20,581	149	791	21,521	11,277	534	1,367	13,178
30-34 ..	7,983	274	1,290	9,547	3,922	580	1,257	5,759
35-39 ..	3,475	335	1,092	4,902	1,872	486	880	3,238
40-44 ..	1,651	399	833	2,883	936	408	554	1,898
45-49 ..	849	444	520	1,813	531	429	288	1,248
50-54 ..	396	470	283	1,149	252	353	132	737
55-59 ..	192	567	152	911	141	270	64	475
60-64 ..	109	409	70	588	69	211	26	306
65 and over	84	541	45	670	44	207	13	264
Total ..	67,665	3,614	5,178	76,457	67,701	3,654	5,102	76,457

1948.								
Under 20..	2,039	..	..	2,039	13,190	5	5	13,200
20-24 ..	29,879	26	97	30,002	34,850	129	449	35,428
25-29 ..	20,527	157	781	21,465	11,133	385	1,309	12,827
30-34 ..	7,484	264	1,168	8,916	3,697	505	1,229	5,431
35-39 ..	3,271	318	1,104	4,693	1,720	475	943	3,138
40-44 ..	1,554	369	755	2,678	896	411	536	1,843
45-49 ..	823	444	481	1,748	464	423	309	1,196
50-54 ..	407	448	292	1,147	264	374	155	793
55-59 ..	215	530	188	933	135	276	74	485
60-64 ..	110	417	59	586	70	216	22	308
65 and over	95	553	47	695	33	208	12	253
Total ..	66,404	3,526	4,972	74,902	66,452	3,407	5,043	74,902

PERCENTAGE OF TOTAL.

1907-10 ..	93.11	6.41	0.48	100.00	94.17	5.22	0.61	100.00
1911-15 ..	93.92	5.51	0.57	100.00	94.62	4.62	0.76	100.00
1916-20 ..	92.82	6.33	0.85	100.00	93.44	5.59	0.97	100.00
1921-25 ..	92.18	6.38	1.44	100.00	92.99	5.49	1.52	100.00
1926-30 ..	92.31	5.93	1.76	100.00	93.46	4.55	1.99	100.00
1931-35 ..	92.63	5.39	1.98	100.00	94.37	3.53	2.10	100.00
1936-40 ..	92.59	4.82	2.59	100.00	93.94	3.38	2.68	100.00
1941-45 ..	91.44	4.77	3.79	100.00	92.11	3.93	3.96	100.00
1946 ..	89.93	4.56	5.51	100.00	89.76	4.73	5.51	100.00
1947 ..	88.50	4.73	6.77	100.00	88.55	4.78	6.67	100.00
1948 ..	88.65	4.71	6.64	100.00	88.72	4.55	6.73	100.00

(ii) *Relative Ages of Bridegrooms and Brides.* The relative ages of bridegrooms and brides in 1947 and 1948 are shown in single years in *Demography Bulletins* Nos. 65 and 66. A summary in age-groups of five years is given below :—

RELATIVE AGES OF BRIDEGROOMS AND BRIDES : AUSTRALIA.

Age of Bridegroom (Years).	Total Bridegrooms.	Age of Bride (Years).							
		Under 15.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.

1947.									
Under 20..	1,920.	1	1,352	540	25	2	..	..	..
20-24 ..	30,553	8	8,542	19,301	2,410	253	28	4	7
25-29 ..	21,521	2	2,802	11,691	5,610	1,161	211	29	15
30-34 ..	9,547	1	539	3,215	3,188	1,819	616	125	44
35-39 ..	4,902	..	130	881	1,296	1,315	892	283	105
40-44 ..	2,883	..	36	211	457	703	726	492	258
45-49 ..	1,813	..	7	68	123	310	435	422	448
50-54 ..	1,149	..	4	15	42	118	180	279	511
55-59 ..	911	..	1	3	18	48	100	163	578
60-64 ..	588	..	..	3	6	19	35	61	464
65 and over	670	..	..	1	3	11	15	40	600
Total Brides	76,457	12	13,413	35,929	13,178	5,759	3,238	1,898	3,030

1948.									
Under 20..	2,039	3	1,475	524	36	1	..	..	..
20-24 ..	30,002	5	8,365	19,060	2,295	225	42	8	2
25-29 ..	21,465	2	2,737	11,833	5,533	1,103	213	36	8
30-34 ..	8,916	..	467	2,928	2,996	1,760	604	126	35
35-39 ..	4,693	..	99	758	1,338	1,251	851	315	81
40-44 ..	2,678	1	28	224	388	668	713	453	203
45-49 ..	1,748	..	11	75	161	279	403	382	437
50-54 ..	1,147	..	5	16	55	91	167	258	555
55-59 ..	933	1	..	5	19	37	98	167	606
60-64 ..	586	..	1	5	4	9	30	64	473
65 and over	695	..	..	..	2	7	17	34	635
Total Brides	74,902	12	13,188	35,428	12,827	5,431	3,138	1,843	3,035

(iii) *Average Ages of Bridegrooms and Brides.* The age at marriage of brides declined slightly during recent years to an average of about 25½ years, although in the period 1937-39 this decline was temporarily arrested and the average rose to almost 26 years. The ages in years for the past six years were :—1943, 25.62 ; 1944, 25.57 ; 1945, 25.93 ; 1946, 25.51 ; 1947, 25.60 ; and 1948, 25.57. For the following five-yearly periods the average ages in years were :—1911-15, 25.76 ; 1916-20, 26.05 ; 1921-25, 25.76 ; 1926-30, 25.57 ; 1931-35, 25.50 ; 1936-40, 25.72 ; and 1941-45, 25.68. The average age in years of bridegrooms was 28.99 in 1943, 28.85 in 1944, 29.29 in 1945, 28.73 in 1946,

28.93 in 1947 and 28.88 in 1948. It follows, therefore, that brides are, generally speaking, three and one-third years younger than bridegrooms. The average age of brides and bridegrooms for the years 1940-46 showed the effects of war-time conditions. The proportion of young persons marrying during those years increased, thereby causing decreases in the average ages of both brides and bridegrooms. The difference in age between brides and bridegrooms was 3.37 in 1943, 3.28 in 1944, 3.36 in 1945, 3.22 in 1946, 3.33 in 1947, and 3.31 in 1948.

5. **Previous Conjugal Condition.**—The number of bachelors and spinsters, widowed and divorced persons, who were married during 1948 has already been given. The following table shows the conjugal condition of the contracting parties. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

PREVIOUS CONJUGAL CONDITION OF PERSONS MARRIED : AUSTRALIA, 1948.

Conjugal Condition of Bridegrooms.	Total Bridegrooms.	Conjugal Condition of Brides.		
		Spinsters.	Widows.	Divorced.
Bachelors	66,404	61,464	1,689	3,251
Widowers	3,526	1,735	1,179	612
Divorced	4,972	3,253	539	1,180
Total Brides ..	74,902	66,452	3,407	5,043

6. **Birthplace of Persons Marrying.**—A table showing birthplace of persons marrying in 1911, 1921 and 1940 may be found on p. 326 of Official Year Book No. 34. In *Demography Bulletins* Nos. 65 and 66, the relative birthplaces of bridegrooms and brides marrying in 1947 and 1948 will be found tabulated in detail.

7. **Occupation of Bridegrooms.**—The distribution of the 74,902 bridegrooms for 1948 amongst classes of occupations was as follows :—Craftsmen, 18,573 ; Operatives, 14,249 ; Commercial and Clerical, 13,529 ; Rural, 9,490 ; Labourers, 6,878 ; Domestic and Protective Services, 3,851 ; Administrative, 2,714 ; Professional and Semi-professional, 2,697 ; and Not Gainfully Occupied and Not Stated, 2,921.

8. **Celebration of Marriages.**—In all the States marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrar-General, or by certain civil officers—in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The registered ministers in 1948 belonged to more than forty different denominations, some of which, however, have only very few adherents. A number of these have been bracketed under the heading " Other Christian ". The figures for 1948 are shown in the following table. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

MARRIAGES IN EACH DENOMINATION, 1948.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia.	
									No.	Per Cent.
Church of England	11,998	6,249	2,827	1,563	1,922	919	33	61	25,572	34.14
Roman Catholic ..	6,000	3,869	2,196	735	793	378	27	43	14,041	18.74
Methodist ..	3,385	2,897	1,830	2,255	755	415	31	5	11,573	15.45
Presbyterian ..	3,785	3,966	1,886	378	498	165	15	11	10,704	14.29
Baptist ..	406	404	203	220	45	95	1	1	1,375	1.84
Congregational ..	394	285	116	310	122	68	..	1	1,296	1.73
Church of Christ ..	111	364	89	230	58	22	..	..	874	1.17
Lutheran ..	119	95	220	302	7	..	..	..	743	0.99
Salvation Army ..	113	98	93	47	19	20	3	1	394	0.53
Greek Orthodox ..	144	49	38	29	32	..	..	2	294	0.39
Seventh-Day Adventist ..	89	27	31	12	20	14	..	..	193	0.26
Unitarian ..	1	44	..	2	..	..	..	..	47	0.06
Other Christian ..	167	70	145	25	33	13	..	..	453	0.61
Hebrew ..	123	206	6	3	19	1	..	..	358	0.48
Total ..	26,835	18,623	9,680	6,111	4,323	2,110	110	125	67,917	90.68
Civil Officers ..	3,329	1,412	445	593	863	318	..	25	6,985	9.32
Grand Total ..	30,164	20,035	10,125	6,704	5,186	2,428	110	150	74,902	100.00
Percentage of Total Marriages celebrated by—										
Ministers of Religion ..	% 88.96	% 92.95	% 95.61	% 91.15	% 83.36	% 86.90	% 100.00	% 83.33	% 90.68	
Civil Officers ..	% 11.04	% 7.05	% 4.39	% 8.85	% 16.64	% 13.10	% ..	% 16.67	% 9.32	

§ 2. Fertility and Reproduction.

1. *Introductory.*—Of the two elements of increase in the population, namely natural increase and net migration, the former has been by far the more important over the past few decades. The level of natural increase depends on the excess of births over deaths and the relation between fertility and mortality determines the rate of reproduction or replacement of the population.

2. *Number of Live Births.*—(i) *Year, 1948.* There are various methods of measuring the fertility of the population by relating the number of births to the numbers in the population. In each the basic data are, of course, the numbers of live births.

The number of live births registered in Australia during 1948 is shown in the table below. The table shows also the number of confinements resulting in one or more live births. The figures exclude cases where the births were of still-born children only. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

LIVE BIRTHS, 1948.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
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MALE BIRTHS.

Single births	33,735	23,003	14,076	8,028	6,531	3,463	131	366	89,333
Twins ..	794	516	302	150	132	64	2	3	1,963
Triplets ..	9	1	4	..	1	..	..	..	15
Total ..	34,538	23,520	14,382	8,178	6,664	3,527	133	369	91,311

FEMALE BIRTHS.

Single births	32,069	22,048	13,197	7,505	6,145	3,370	147	353	84,834
Twins ..	616	526	274	184	120	79	..	3	1,802
Triplets ..	11	5	5	3	2	3	..	..	29
Total ..	32,696	22,579	13,476	7,692	6,267	3,452	147	356	86,665

TOTAL BIRTHS.

Single births	65,804	45,051	27,273	15,533	12,676	6,833	278	719	174,167
Twins ..	(a) 1,410	(b) 1,042	576	334	(c) 252	(d) 143	2	6	(e) 3,765
Triplets ..	(f) 20	6	9	3	3	3	..	..	(f) 44
Total ..	67,234	46,099	27,858	15,870	12,931	6,979	280	725	177,976

TOTAL CONFINEMENTS (LIVE BIRTHS).

Mothers of Nuptial Children ..	63,758	44,067	26,060	15,205	12,320	6,630	237	705	168,982
Mothers of Ex-nuptial Children ..	2,777	1,521	1,504	496	487	279	42	17	7,123
Total Mothers	66,535	45,588	27,564	15,701	12,807	6,909	279	722	176,105

(a) Excludes 38 still-born twins. (b) Excludes 28 still-born twins. (c) Excludes 8 still-born twins.
 (d) Excludes 7 still-born twins. (e) Excludes 81 still-born twins. (f) Excludes 1 still-born triplet.

NOTE.—For Queensland and South Australia the differentiation between single and multiple births cannot be regarded as completely accurate as the registration procedure there differs from that adopted in other States.

(ii) *Years 1861 to 1948.* The annual average number of live births in each State and Territory for each five-year period from 1861 to 1945 and the total number of live births in each State and Territory for each year 1944 to 1948 are given in the following table:—

LIVE BIRTHS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.	
Annual Average—										
1861-1865	15,992	24,670	2,352	6,095	653	3,090	..	..	52,852
1866-1870	18,529	26,210	4,524	7,014	761	2,936	..	..	59,974
1871-1875	21,308	27,272	5,856	7,279	807	3,004	..	..	65,586
1876-1880	25,514	26,470	7,507	9,262	922	3,433	..	..	73,108
1881-1885	31,793	28,051	9,796	11,324	1,093	4,286	..	..	86,343
1886-1890	37,660	34,461	14,030	10,640	1,539	4,742	..	..	103,072
1891-1895	39,513	36,171	14,573	10,619	2,048	4,959	..	..	107,883
1896-1900	36,716	31,089	14,193	9,436	4,480	4,681	..	..	100,595
1901-1905	37,968	30,182	13,770	8,883	6,682	5,128	(a) 31	..	102,644	
1906-1910	42,967	31,257	15,022	9,699	7,690	5,465	31	..	112,131	
1911-1915	51,631	35,205	19,100	12,092	8,844	5,807	47	(b) 43	132,769	
1916-1920	51,543	33,339	19,438	11,526	7,728	5,469	83	40	129,166	
1921-1925	54,439	35,904	20,058	11,744	8,055	5,566	68	33	135,927	
1926-1930	53,308	34,333	19,361	11,006	8,748	4,819	70	118	131,763	
1931-1935	44,964	28,380	17,480	8,646	8,061	4,547	79	145	112,302	
1936-1940	47,679	30,282	19,534	9,388	8,877	4,866	125	221	120,972	
1941-1945	56,583	38,002	23,431	12,546	10,409	5,418	113	384	146,886	
Year—										
1944	..	59,612	39,358	24,520	13,311	10,870	5,200	89	384	153,344
1945	..	61,662	41,200	26,713	14,033	10,672	5,785	90	405	160,560
1946	..	67,247	46,693	27,024	15,813	12,105	6,847	132	518	176,379
1947	..	69,398	47,366	28,358	16,317	12,874	7,140	276	655	182,384
1948	..	67,234	46,099	27,858	15,870	12,931	6,979	280	725	177,976

(a) Included with South Australia prior to 1901.

(b) Part of New South Wales prior to 1911.

3 Crude Birth-rates.—The oldest and most popular method of measuring fertility is to relate the number of births to the total population, thus obtaining the crude birth-rate. The crude birth-rate measures the rate per thousand persons (irrespective of age or sex) at which the population has added to its numbers by way of births during a given period.

Crude birth-rates for each five-year period from 1861 to 1945 and for each year from 1944 to 1948 for each State and Territory are set out below:—

CRUDE BIRTH-RATES.(a)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Annual Average—									
1861-1865	42.75	43.53	43.37	43.30	35.68	33.99	..	..	42.44
1866-1870	40.85	39.50	44.42	40.21	32.35	30.08	..	..	39.60
1871-1875	39.13	35.68	42.69	37.17	31.08	29.69	..	..	37.04
1876-1880	38.61	32.12	38.55	37.85	32.49	31.49	..	..	35.46
1881-1885	37.99	30.99	37.39	38.20	34.23	35.10	..	..	35.17
1886-1890	36.63	32.79	39.24	34.23	35.72	34.73	..	..	35.22
1891-1895	33.20	30.96	35.13	31.47	31.49	32.89	..	..	32.42
1896-1900	28.12	26.24	30.27	26.58	28.54	28.29	..	..	27.68
1901-1905	26.83	25.05	26.73	24.87	30.55	28.64	(b)7.04	..	26.36
1906-1910	27.35	25.12	26.87	25.57	29.56	29.14	8.41	..	26.67
1911-1915	28.75	25.39	29.14	28.33	28.62	30.01	12.70	18.76	27.78
1916-1920	26.31	23.04	27.53	25.19	24.50	27.31	17.82	16.11	25.36
1921-1925	24.76	22.42	25.20	22.76	22.88	25.84	18.19	9.61	23.89
1926-1930	21.79	19.67	21.92	19.42	21.55	22.29	15.70	14.65	21.00
1931-1935 ^d	17.29	15.60	18.49	14.89	18.37	19.96	15.99	15.81	16.95
1936-1940 ^d	17.51	16.20	19.47	15.82	19.16	20.57	19.86	18.50	17.51
1941-1945 ^d	19.78	19.25	22.26	20.41	21.71	22.23	11.35	26.83	20.26
Year—									
1944(^d) ..	20.65	19.78	23.10	21.49	22.58	21.17	8.52	27.04	20.98
1945(^d) ..	21.13	20.53	24.81	22.38	21.89	23.27	8.56	26.98	21.73
1946(^d) ..	22.83	23.05	24.79	24.90	24.57	27.15	12.49	32.61	23.62
1947(^d) ..	23.25	23.06	25.65	25.25	25.60	27.70	25.34	38.75	24.06
1948 ..	22.19	22.06	24.80	24.11	25.12	26.38	22.97	39.90	23.08

(a) Number of births per 1,000 of mean population.

1901. (c) Part of New South Wales prior to 1911.

(b) Included with South Australia prior to 1901. (d) Rates based on mean population adjusted in accordance with the final results of the Census of 30th June, 1947.

NOTE.—The birth-rates in the table above are based on live births registered in the respective States and Territories. Some years ago a large proportion of births in respect of which the mother's usual residence was the Australian Capital Territory took place in Queanbeyan, just over the New South Wales border, but with improved hospital facilities in the Territory the movement to outside hospitals rapidly diminished and has been reversed since 1939. The following rates, based on births in respect of which the mother's usual residence is the Australian Capital Territory, are a truer measure of birth-rates in the Australian Capital Territory:—

Annual Average.	Year.
1921-1925 17.07	1944 21.41
1926-1930 22.45	1945 22.58
1931-1935 19.53	1946 26.00
1936-1940 19.29	1947 25.85
1941-1945 23.06	1948 27.46

The variations similarly caused in the birth-rates for the States and Northern Territory by referring the birth registrations to the State or Territory in which the mother was usually resident are shown by the following corrected rates for 1948:—New South Wales, 22.25; Victoria, 22.01; Queensland, 24.92; South Australia, 24.11; Western Australia, 25.14; Tasmania, 26.47; and Northern Territory, 23.38.

The preceding table shows a marked reduction in the crude birth-rate since 1861. The average annual rate, which for the five years ended 1865 was 42.44, fell to 27.68 for the five years ended 1900. In the earlier years of the present century the rate fluctuated somewhat but from 1912, when 28.60 was recorded, there was an almost continuous decline to the very low figure of 16.39 in 1934. The decline in the depression years was to some extent occasioned by the postponement of marriages, and with subsequent improvement in economic conditions the rate rose. Since 1940 the rate has increased quite appreciably due both to a continued improvement in the economic welfare of the community and the war-time boom in marriages. The latter has resulted in an abnormal number of first births but investigation indicates that rates for births other than first were generally slightly higher than might have been expected from pre-war experience.

4. Crude Birth-rates of Various Countries.—The following table gives the crude birth-rates for Australia and each State in comparison with the rates for various other countries.

CRUDE BIRTH-RATES (a) : VARIOUS COUNTRIES.

Country.	1908-13.	1921-25.	1926-30.	1931-35.	1948.
Egypt	43.6	43.0	44.3	42.9	(b) 57.5
Mexico	(c)	(d) 31.9	36.7	43.1	43.1
Ceylon	36.9	39.2	40.4	36.9	40.5
Japan	32.9	34.6	33.5	31.6	34.0
Chile	(e) 39.9	39.4	41.6	33.6	33.6
Greece	(c)	23.0	30.2	29.5	(b) 29.1
Union of South Africa (f)	(e) 31.9	27.1	25.9	24.1	27.0
Finland	29.5	24.7	22.5	19.5	26.9
Canada	(c)	27.4	24.1	21.4	26.9
Portugal	34.6	33.2	31.2	29.0	26.3
Yugoslavia	(c)	35.0	34.2	31.8	(g) 25.9
New Zealand (h)	26.5	22.2	19.7	17.0	25.5
Netherlands	29.1	25.7	23.2	21.2	25.3
Poland	37.4	34.7	32.2	27.8	(g) 24.6
United States of America	(i) 25.1	22.5	19.7	(j) 16.9	24.4
Argentina	37.1	32.4	30.1	26.4	(k) 24.3
Czechoslovakia	31.1	27.1	23.2	19.6	23.4
Australia (l)	27.4	23.9	21.1	16.9	23.1
Tasmania (l)	29.6	26.0	22.7	20.0	26.4
Western Australia (l)	28.9	23.0	22.0	18.4	25.1
Queensland (l)	28.2	25.0	21.3	18.5	24.8
South Australia (l)	27.1	22.7	19.2	14.9	24.1
New South Wales (l)	28.2	24.9	22.1	17.3	22.2
Victoria (l)	25.3	22.4	19.7	15.6	22.1
Spain	32.1	29.8	28.5	27.1	23.0
Rumania	43.1	37.9	35.2	32.9	(b) 22.4
Eire	23.1	20.3	20.1	19.4	21.9
Italy	32.4	29.8	26.8	23.8	21.6
France	19.5	19.3	18.2	16.5	20.8
Norway	26.0	22.2	18.0	15.2	20.6
Denmark	27.1	22.3	19.4	17.7	20.3
Hungary	(e) 34.3	29.4	26.0	22.4	19.1
Switzerland	24.7	19.5	17.6	16.4	19.0
Sweden	24.4	19.1	15.9	14.1	18.4
Great Britain and Northern Ireland	24.6	20.4	17.2	15.5	18.1
Northern Ireland	23.1	23.1	21.2	20.0	21.7
Scotland	26.2	23.0	20.0	18.2	19.4
England and Wales	24.9	19.9	16.5	15.0	17.9
Belgium	23.4	20.4	18.6	16.8	17.3
Germany	29.5	22.1	18.4	16.6	(m) 16.0

(a) Number of births per 1,000 of mean population. (b) 1947. (c) Not available.
 (d) 1922-25. (e) 1911-13. (f) White population only. (g) 1939. (h) Excludes
 Maoris. (i) 1915. (j) 1933-35. (k) 1946. (l) Excluding full-blood aborigines. (m) 1943.

5. **Fertility-rates.**—The principal demographic factors affecting the level of crude birth-rates are the proportion of women of child-bearing age in the population and the proportion of such women who are married. These factors may vary considerably at different periods and for different countries, and a population with a high percentage of married women of child-bearing age will have a much higher crude birth-rate than one with a low percentage, although the fertilities of the two populations may be identical.

In order to compare fertilities, births are sometimes related to the number of women of child-bearing age or, alternatively, nuptial births are related to the number of married women of child-bearing age. Thus births are related to potential mothers, giving the fertility-rate.

The following table sets out for certain periods commencing with 1880-82 the number of births per thousand of mean population, the number of births per thousand women of child-bearing age and the number of nuptial births per thousand married women of child-bearing age. For purposes of this table the child-bearing age has been taken to be 15-44 years inclusive, but births to mothers who were stated to be under 15 or over 44 years have been included in the compilations.

CRUDE BIRTH-RATES AND FERTILITY-RATES : AUSTRALIA.

Period.	Average Annual Rates.			Index Nos. (Base: 1880-82 = 100).		
	Crude Birth-rate. (a)	Fertility-rates.		Crude Birth-rate. (a)	Fertility-rates.	
		Births per 1,000 Women aged 15-44 Years.	Nuptial Births per 1,000 Married Women aged 15-44 Years.		Births per 1,000 Women aged 15-44 Years.	Nuptial Births per 1,000 Married Women aged 15-44 Years.
1880-82 ..	35.3	170	321	100	100	100
1890-92 ..	34.5	159	332	98	94	103
1900-02 ..	27.2	117	235	77	69	73
1910-12 ..	27.2	117	236	77	69	74
1920-22 ..	25.0	107	197	71	63	61
1932-34 ..	16.7	71	131	47	42	41
1946-48 ..	23.6	104	167	67	61	52

(a) Number of births per 1,000 of mean population.

The table above shows how increasing proportions both of women of child-bearing age and of married women of child-bearing age inflate the crude birth-rate. Thus while the nuptial birth-rate for married women increased by only 27 per cent. over the period 1932-34 to 1946-48 the crude birth-rate rose by 43 per cent. due principally to the greatly increased number of marriages during that period.

6. **Specific Fertility-rates.**—So long as customary ages at marriage do not change drastically, the main demographic factor affecting the number of births is the age composition of the potential mothers in the population. Within the child-bearing group the fertility of women of different ages varies considerably and a clearer view of the fertility of the population can be obtained from an examination of what are known as its specific fertility-rates, that is, the number of births to women of specified ages per thousand women of those particular ages.

Specific fertility-rates are usually calculated on the basis of female births rather than total births and are frequently expressed in age-groups as well as in single ages. The following table sets out specific fertility-rates for Australia over the period 1921 to 1948 in five-yearly age-groups.

SPECIFIC FERTILITY-RATES(a) : AUSTRALIA.

Age-group (Years).	1921.	1926.	1931.	1936.	1941.	1944.	1945.	1946.	1947.	1948.
15-19 ..	12.83	14.02	13.08	12.18	11.00	11.02	11.41	12.63	15.36	16.49
20-24 ..	65.45	60.23	53.08	50.33	59.42	62.49	64.46	73.52	80.68	79.14
25-29 ..	82.24	76.82	62.47	62.02	70.78	78.25	81.17	89.51	90.08	87.50
30-34 ..	68.50	61.90	51.25	46.33	49.72	59.48	61.47	65.03	63.76	61.26
35-39 ..	49.48	43.55	33.23	28.80	28.69	35.01	36.60	37.43	36.48	34.11
40-44 ..	21.66	17.63	13.61	10.19	9.52	10.60	11.42	11.87	11.44	10.92
45-49 ..	2.10	1.90	1.45	1.11	0.80	0.88	0.91	1.03	0.80	0.76

(a) Number of female births per 1,000 women in each age-group.

The table above indicates that the most fertile age-group is 25-29 years. The decline in fertility between 1921 and 1936 was general but was more pronounced in the older age-groups. During the period 1936 to 1948 a rise in fertility occurred in all but the oldest age-group.

7. Gross and Net Reproduction Rates.—A single measure of reproduction known as the gross reproduction rate is obtained by adding together the specific fertility-rates for each single age in the child-bearing group. This measure indicates the number of female children who would be born on the average to women living right through the child-bearing period, if the conditions on which the rate is based continue. The rate is unaffected by the age composition of the potential mothers, and consequently it shows more clearly than the crude birth rate the reproductive propensity of the population. It is, however, an imperfect measure of reproduction because it does not take into account the females who fail to live from birth to the end of the reproductive period. A more accurate measure of this nature is obtained by multiplying the specific fertility-rates by the number of females in the corresponding age-group of the stationary or life table population and summing the products. Allowance is thus made for the effect of mortality and the result is known as the net reproduction rate. The net reproduction rate indicates the average number of female children who would be born to women during their lifetime if they were subject at each age to the fertility and mortality rates on which the calculation is based. A constant net reproduction rate of unity indicates that the population will ultimately become stationary. If it continues greater than unity, the population will ultimately increase, if less than unity, it will ultimately decrease. The following table should be read in the light of the comment which follows it and of the index of fertility in paragraph 9 hereof.

GROSS AND NET REPRODUCTION RATES : AUSTRALIA.

Year.	Gross Reproduction Rate.	Net Reproduction Rate.	Year.	Gross Reproduction Rate.	Net Reproduction Rate.
1881 (a) ..	2.65	(b) 1.88	1940 (g) ..	1.100	1.004
1891 (a) ..	2.30	(b) 1.73	1941 (g) ..	1.154	1.053
1901 (a) ..	1.74	(c) 1.39	1942 (g) ..	1.156	1.056
1911 ..	1.705	(d) 1.421	1943 (g) ..	1.257	1.148
1921 ..	1.511	(e) 1.313	1944 (g) ..	1.289	1.176
1931 ..	1.141	(f) 1.039	1945 (g) ..	1.337	1.220
1936 (g) ..	1.060	0.967	1946 (g) ..	1.455	1.328
1937 (g) ..	1.075	0.981	1947 (g) ..	1.493	1.364
1938 (g) ..	1.069	0.976	1948 ..	1.451	1.326
1939 (g) ..	1.080	0.986			

(a) Approximate only. (b) 1881-1890 mortality experience used. (c) 1891-1900 mortality experience used. (d) 1901-1910 mortality experience used. (e) 1920-1922 mortality experience used. (f) 1932-1934 mortality experience used for 1931 and subsequent years. In so far as mortality has decreased since then, the net reproduction rates tend to underestimate the true position. (g) The numbers of females of child-bearing age on which rates for these years are based have not been adjusted in accordance with the results of the Census of 30th June, 1947.

Since 1881 there has been a substantial downward trend in both rates, but the gross rate has fallen considerably more than the net, showing that the decline in fertility has been offset to some extent by a decline in mortality. The net reproduction rate was below unity over the period 1932 to 1939, and if the low level of those years were to continue, ultimate population decline would be certain. The progressive rise in both gross and net reproduction rates from 1939 to 1947 has been due largely to abnormally high marriage rates. Fluctuations in marriage rates affect both gross and net reproduction rates substantially. When fluctuations in marriage rates are transient, reproduction rates calculated as above are not valid as indicators of relative fertility nor of the extent to which population will replace itself. The fertility of marriages is measured in paragraph 9 below.

8. Gross and Net Reproduction Rates of Various Countries.—In the following table a comparison is given of the gross and net reproduction rates recorded for various countries.

GROSS AND NET REPRODUCTION RATES : VARIOUS COUNTRIES.

Country.	Period.	Reproduction Rate.		Country.	Period.	Reproduction Rate.	
		Gross.	Net.			Gross.	Net.
Netherlands ..	1946	1.92	1.76	Sweden ..	1945	1.26	1.15
Canada ..	1946	1.64	(a)	Portugal ..	1946	1.54	1.12
New Zealand(b)	1946	1.59	1.47	England and Wales ..	1946	1.21	1.11
United States of America(c) ..	1946	1.44	1.36	Spain ..	1943	1.43	1.10
Union of South Africa (c) ..	1939	1.50	1.35	Norway ..	1945	1.18	1.08
Australia ..	1948	1.45	1.33	Belgium ..	1947	1.20	1.00
Denmark ..	1947	1.40	1.27	Austria ..	1939	(a)	1.00
Finland ..	1945	1.48	1.24	Latvia ..	1939	1.18	0.99
Eire ..	1940-42	1.42	1.19	Germany ..	1939	(a)	0.98
Scotland ..	1946	1.34	1.19	Hungary ..	1941	(a)	0.96
Switzerland ..	1946	1.29	1.16	France ..	1944	1.09	0.94

(a) Not available.

(b) Excludes Maoris.

(c) White population only.

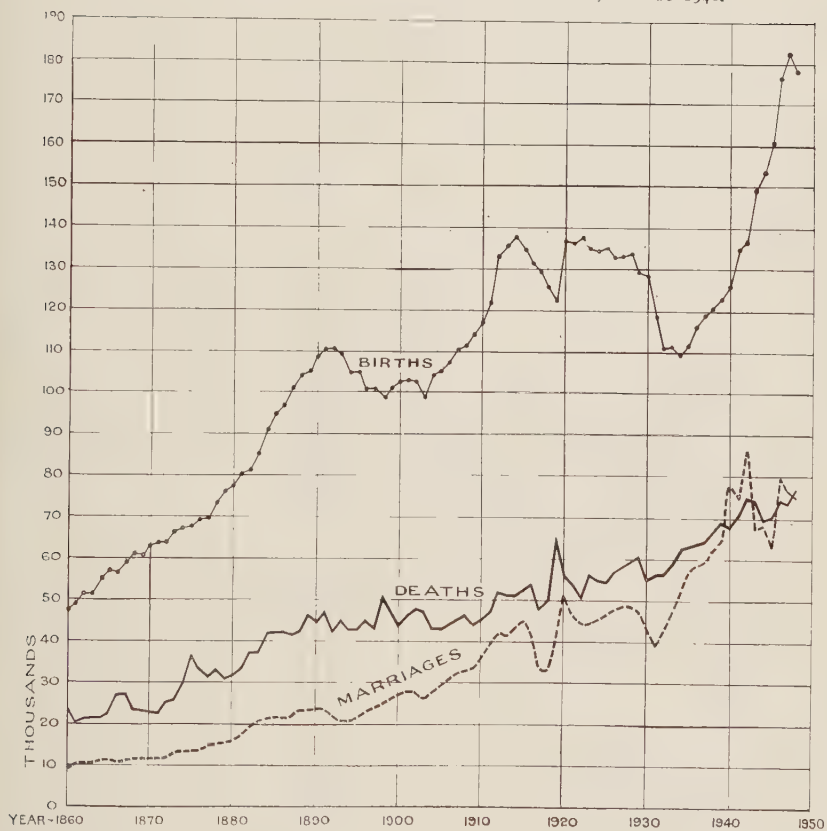
NOTE.—Most of the above rates are affected by variations in the incidence of marriage.

9. Fertility of Marriages.—In issues of the Official Year Book prior to No. 35 estimates of the fertility of marriages were published. These were calculated by relating the births of one five-yearly period to the marriages in the preceding five years (*see* Official Year Book No. 35, p. 329). Since the publication of that issue, an improved method has been formulated for measuring current marriage fertility by relating nuptial confinements in each year to the marriages from which they could have resulted. Confinements of women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously. The table below sets out this index of current fertility per marriage in respect of confinements in the individual years shown.

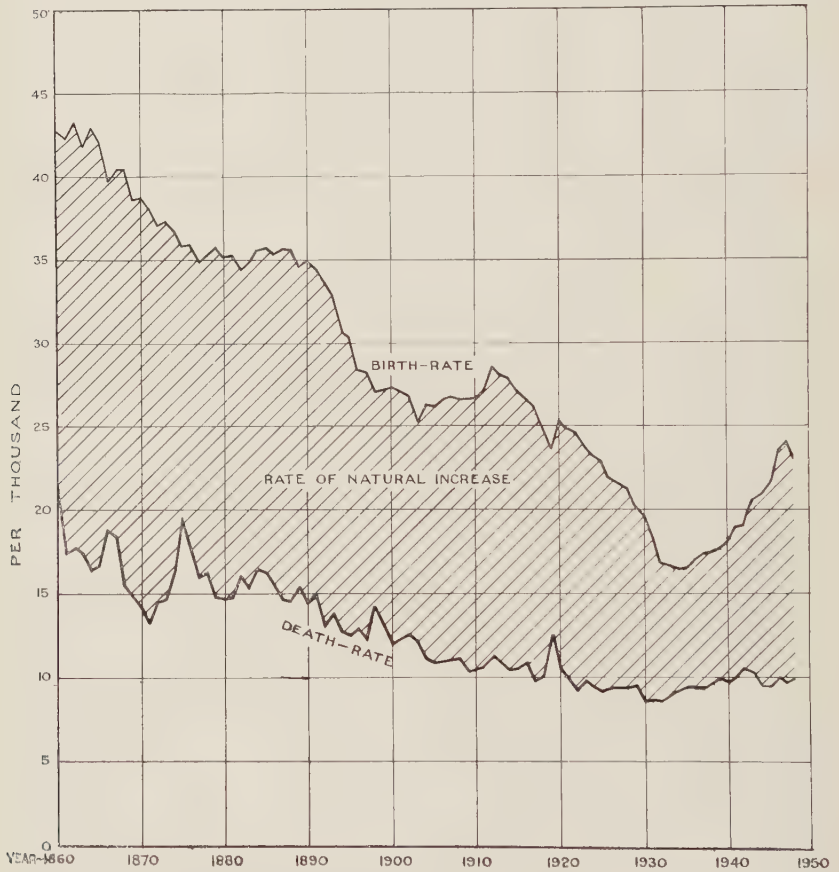
FERTILITY OF MARRIAGES : AUSTRALIA.

Year.	Nuptial Confinements per Marriage.	Year.	Nuptial Confinements per Marriage.	Year.	Nuptial Confinements per Marriage.
1934.. ..	2.30	1939 ..	2.20	1944 ..	2.28
1935.. ..	2.27	1940 ..	2.18	1945 ..	2.36
1936.. ..	2.28	1941 ..	2.19	1946 ..	2.55
1937.. ..	2.27	1942 ..	2.12	1947 ..	2.55
1938.. ..	2.22	1943 ..	2.21	1948 ..	2.44

BIRTHS, DEATHS, AND MARRIAGES—AUSTRALIA, 1860 TO 1948.

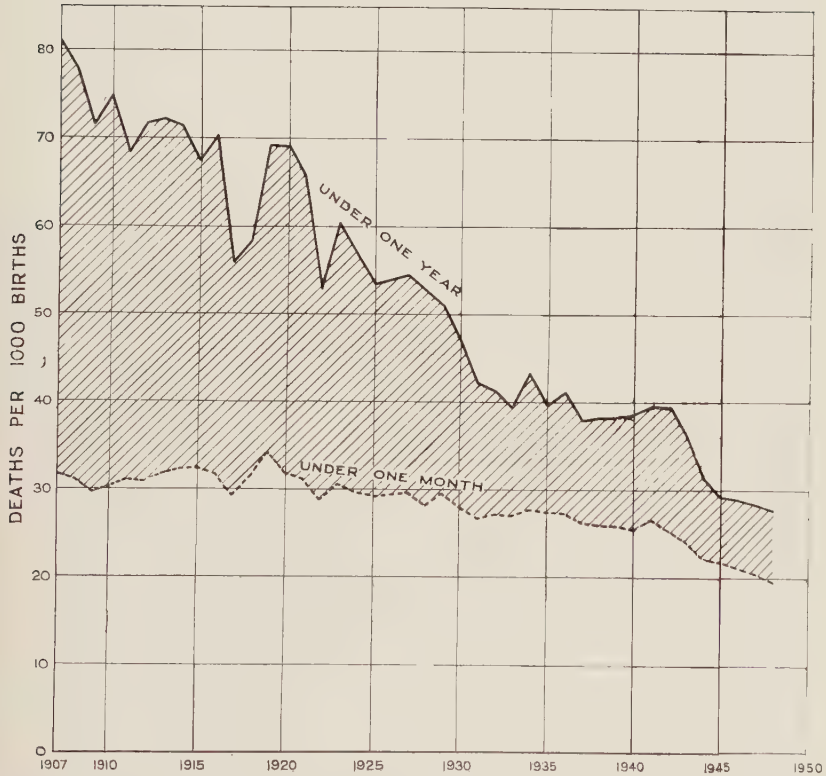


RATES OF BIRTHS, DEATHS, AND NATURAL INCREASE—AUSTRALIA, 1860 TO 1948.



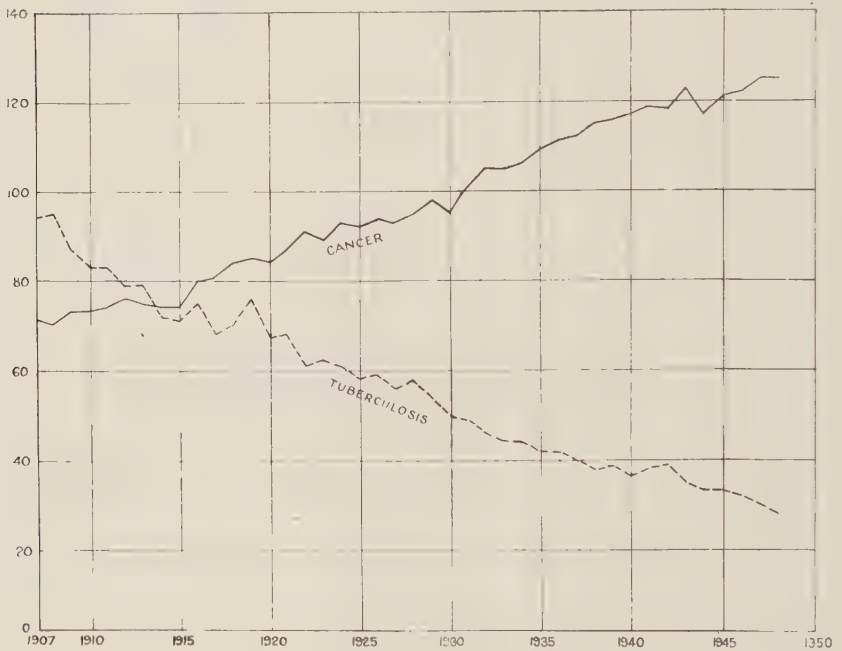
EXPLANATION.—The upper curve represents the number of births per 1,000 persons, while the lower curve represents the corresponding death-rate. The distance between the two curves is the rate of natural increase.

INFANTILE MORTALITY RATES—AUSTRALIA, 1907 TO 1948.



EXPLANATION.—This graph shows the marked improvement in infantile mortality rates over the past 40 years. The improvement has been confined mainly to children over one month, considerably less having occurred in the first month of life (*see* page 618).

DEATH-RATES—CANCER AND TUBERCULOSIS: AUSTRALIA, 1907 TO 1948.



(See page 640.)

EXPLANATION.—The vertical scale represents the number of deaths per 100,000 of the population.

The figure for a particular year gives the estimated number of children which a marriage would produce according to the fertility conditions of that year. It will be noted that there was an almost continuous decline to 1942, but a pronounced increase from 1943 to 1946. Comparing this index with the net reproduction rate it is evident that the rise in the latter since 1935 has been caused by a rise in the marriage rate, due firstly to the postponed depression marriages, and secondly to war-time marriages, and only in the last six years to any increase in the fertility of marriages.

10. *Masculinity of Live Births.*—(i) *General.* The masculinity of live births, i.e., the number of males born for every 100 female births, has remained fairly stable for Australia at about 105. But when the number of births for which masculinity is being calculated is small (for example, State totals), considerable variation is shown. For 1948 the figures ranged from 90.48 in the Northern Territory to 106.72 in Tasmania. The averages for the last intercensal period 1933-47 were as follows:—New South Wales, 105.05; Victoria, 105.52; Queensland, 105.15; South Australia, 105.93; Western Australia, 104.16; Tasmania, 105.76; Australia, 105.21. The following table shows the figures for Australia for each ten-year period from 1901 to 1940 and for each year 1945 to 1948:—

MASCULINITY(a) OF LIVE BIRTHS REGISTERED : AUSTRALIA.

Particulars.	1901-10.	1911-20.	1921-30.	1931-40.	1945.	1946.	1947.	1948.
Total Births ..	105.22	105.27	105.55	105.12	105.57	106.51	105.93	105.36
Ex-nuptial Births ..	104.08	105.25	105.16	105.36	107.77	110.42	101.75	103.55

(a) Number of males born for every 100 female births.

(ii) *Masculinity of Nuptial and Ex-nuptial Births—Various Countries.* A table showing the masculinity of nuptial and ex-nuptial births for various countries appears on p. 942 of Official Year Book No. 22.

11. *Ex-nuptial Live Births.*—(i) *General.* The number of ex-nuptial live births reached 7,438 in 1913, but it fell considerably to 4,775 in 1940. After 1940, however, the number rose sharply to 7,613 in 1946, falling again slightly to 7,173 in 1948. The average number of ex-nuptial live births in Australia during the five years 1911-15 was 7,209, and for the period 1941-45 it was only 6,201, a decline of 14.0 per cent., whereas the annual average total live births for the same period increased by 10.6 per cent. from 132,769 to 146,886; hence a comparison between the results for these two periods shows that the proportion of ex-nuptial births has fallen from 5.43 to 4.23 per cent. of all births.

The variations of the ex-nuptial birth-rates as between the individual States and Territories for 1948 are shown below. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

EX-NUPTIAL LIVE BIRTHS AND BIRTH-RATES, 1948.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Number ..	2,800	1,533	1,514	497	490	280	42	17	7,173
Percentage of Total Births	4.16	3.33	5.43	3.13	3.79	4.01	15.00	2.34	4.03

The numbers of births and the rates at intervals from 1901 to 1948 are as follows:—

EX-NUPTIAL LIVE BIRTHS AND BIRTH-RATES : AUSTRALIA.

Particulars.	Annual Averages—				1943.	1944.	1945.	1946.	1947.	1948.
	1901-10.	1911-20.	1921-30.	1931-40.						
Number of Ex-nuptial Births ..	6,498	6,836	6,238	5,133	6,505	6,905	7,195	7,613	7,263	7,173
Percentage of Total Births	6.05	5.22	4.66	4.40	4.36	4.50	4.48	4.32	3.98	4.03

It is, of course, possible that the number of ex-nuptial births is somewhat understated owing to diffidence in proclaiming the fact of ex-nuptiality, and it is almost certain that the majority of unregistered births are ex-nuptial.

(ii) *Rate of Ex-nuptiality.* A further comparison is obtained by calculating the number of ex-nuptial births per thousand of the single and widowed female population between the ages of 15 and 45 years. The number of ex-nuptial births per 1,000 unmarried women of ages 15 to 45 has been found to be as follows:—1880-82, 14.49; 1890-92, 15.93; 1900-02, 13.30; 1910-12, 12.53; and 1920-22, 10.50. The estimated number for the years 1930-32 was 7.87. The comparative results for various countries given on p. 944 of Official Year Book No. 22 were taken from the *Annuaire International de Statistique*, Vols. II. and V., and showed that ex-nuptial births varied from 38 per 1,000 unmarried women aged 15 to 49 years in Hungary (1906-15) to 4 in Ireland (1900-12) and Bulgaria (1910-11). The rate for Australia was 12 per thousand for the years 1906-15.

(iii) *Comparison of Rates.* The following table, showing the relative proportions of ex-nuptial and nuptial births to the total population, discloses a much greater proportional reduction in the ex-nuptial birth-rate than in the nuptial rate:—

CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH-RATES(a) : AUSTRALIA.

Birth-rate.	Annual Averages—				1945.	1946.	1947.	1948.
	1901-10.	1911-20.	1921-30.	1931-40.				
Ex-nuptial ..	1.60	1.39	1.04	0.76	0.98	1.02	0.96	0.93
Nuptial ..	24.91	25.18	21.40	16.47	20.75	22.60	23.10	22.15
Total ..	26.51	26.57	22.44	17.23	21.73	23.62	24.06	23.08

(a) Number of births per 1,000 of mean population.

12. *Legitimations.*—In the several States Acts have been passed to legitimize children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who comes within the scope of their purposes, born before or after the passing thereof, is deemed to be legitimate from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. During 1947 and 1948 the numbers of children legitimized in Australia were 978 and 874 respectively, compared with 883 in 1939.

13. *Multiple Births.*—Among the total number of 177,976 live births registered in Australia in 1948, there were 174,167 single births, 3,705 twins and 44 triplets. The number of cases of twins was 1,923 and of triplets 15, there being 81 still-born twins and 1 still born triplet. The total number of mothers was, therefore, 176,105, the proportion of mothers of twins being one in every 92, of mothers of triplets one in every 11,740, and of mothers of all multiple births one in every 91 mothers. Multiple births occurred in 1.10 per cent. of confinements.

The proportion of multiple births to total births does not vary greatly from year to year and exhibits no tendency towards increase or decrease:—

MULTIPLE BIRTHS : AUSTRALIA.

Particulars.	Annual Averages—			1945.	1946.	1947.	1948.
	1911-20.	1921-30.	1931-40.				
Mothers of Multiple Births ..	1,387	1,420	1,220	1,803	2,039	2,030	1,938
Percentage on Total Mothers ..	1.06	1.07	1.06	1.14	1.17	1.12	1.10

14. *Ages of Parents.*—The relative ages of the parents of children registered in 1947 and 1948 have been tabulated separately for male and female births, multiple births being distinguished from single births. For total births and for multiple births the relative single ages of parents are shown in *Demography Bulletins* Nos. 65 and 66. In the

present work the exigencies of space allow only the insertion of a table for 1948 showing, in respect of all confinements, the relative ages of parents in groups of five years:—

ALL CONFINEMENTS : RELATIVE AGES OF PARENTS, AUSTRALIA, 1948.

Age of Father (Years), and Type of Birth.	Total.	Age of Mother (Years).								
		Under 15.	15-19.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	Not Stated.
Under 20 { Single	977	2	702	262	11	..	..	..	..	..
Twins	5	..	4	1	..	..	..	..	..	..
20-24 { Single	25,332	2	4,698	17,505	2,892	203	29	2	1	..
Twins	194	..	33	126	33	2	..	..	..	..
Triplets	3	..	..	3	..	..	..	..	..	..
25-29 { Single	49,810	..	1,894	21,026	23,127	3,398	333	31	1	..
Twins	480	..	9	187	237	40	7	..	..	..
Triplets	4	..	..	3	1	..	..	..	..	..
30-34 { Single	42,395	..	400	6,034	18,349	15,086	2,365	160	1	..
Twins	498	..	1	43	227	202	24	1	..	..
Triplets	3	..	..	..	1	2	..	..	..	..
35-39 { Single	27,610	..	88	1,516	5,955	11,415	7,843	781	12	..
Twins	386	..	1	13	63	173	124	12	..	..
Triplets	1	..	..	..	..	1	..	..	..	..
40-44 { Single	13,609	..	42	389	1,547	3,999	5,460	2,197	65	..
Twins	197	..	..	5	24	59	79	29	1	..
Triplets	2	..	..	..	..	1	1	..	..	..
45-49 { Single	5,053	..	6	127	418	1,114	1,889	1,342	157	..
Twins	81	..	..	3	7	18	37	15	1	..
Triplets	1	..	..	..	..	..	..	1	..	..
50-54 { Single	1,463	..	2	27	111	312	519	422	70	..
Twins	15	..	..	1	1	2	9	2	..	..
Triplets	1	..	..	..	..	..	..	1	..	..
55-59 { Single	521	..	..	12	35	101	196	147	30	..
Twins	7	..	..	..	1	..	1	3	2	..
60-64 { Single	162	..	..	5	9	30	60	49	9	..
Twins	4	..	..	..	..	..	1	3	..	..
65 and over { Single	74	..	..	1	11	18	27	15	2	..
Twins	2	..	..	..	..	2	..	..	..	..
Not Stated Single	2	..	..	..	..	1	..	1	..	..
Mothers of Nuptial Children { Single	167,098	4	7,832	46,904	52,465	35,677	18,721	5,147	348	..
Twins	1,869	..	48	379	593	498	282	65	4	..
Triplets	15	..	..	6	2	3	2	2	..	..
Total	168,982	4	7,880	47,289	53,060	36,178	19,005	5,214	352	..
Mothers of Ex-nuptial Children { Single	7,069	16	1,597	2,339	1,420	921	557	198	19	..
Twins	54	..	4	12	16	9	11	2	..	..
Total	7,123	16	1,601	2,351	1,436	930	568	200	19	2
Total Mothers { Single	174,167	20	9,429	49,243	53,885	36,598	19,278	5,345	367	2
Twins	1,923	..	52	391	609	507	293	67	4	..
Triplets	15	..	..	6	2	3	2	2	..	..
Total	176,105	20	9,481	49,640	54,496	37,108	19,573	5,414	371	2

15. Birthplaces of Parents.—A table showing birthplaces of parents of children whose births were registered during 1948 appears in *Demography Bulletin* No. 66.

16. Occupation of Fathers.—A table showing occupations of the fathers of all nuptial children registered in 1948 appears in *Demography Bulletin* No. 66.

17. Age, Duration of Marriage and Issue of Mothers.—(i) *General.* The total number of nuptial confinements resulting in live births in 1948 was 168,982, comprising 167,098 single births, 1,869 cases of twins and 15 cases of triplets. The tables exclude the previous issue of former marriages and still-born children. On the other hand, they include children by the same father which were born to the mother prior to the marriage. Children born during the current year are included in the total issue shown.

The tables are shown in summarized form, more complete details being given in *Demography Bulletin* No. 66.

(ii) *Duration of Marriage and Issue of Mothers.* The following table shows that the duration of marriage of mothers of nuptial children ranged from less than one year up to 32 years, and that the average family increased fairly regularly with the duration of marriage. The average issue of married mothers who bore children in 1948 was 2.35 compared with 2.31 in 1947, 2.36 in 1946, 2.42 in 1945 and 2.42 in 1944.

NUPTIAL CONFINEMENTS : DURATION OF MARRIAGE AND ISSUE OF MOTHERS, AUSTRALIA, 1948.

Duration of Marriage. (Years.)	Total Married Mothers.	Total Issue.	Average Issue.	Duration of Marriage. (Years.)	Total Married Mothers.	Total Issue.	Average Issue.
0-1 ..	25,086	25,497	1.02	18-19 ..	879	5,228	5.95
1-2 ..	23,720	28,475	1.20	19-20 ..	743	4,679	6.30
2-3 ..	18,115	30,405	1.68				
3-4 ..	14,684	28,858	1.97	20-21 ..	584	3,966	6.79
4-5 ..	13,226	28,871	2.18	21-22 ..	418	3,098	7.41
				22-23 ..	253	1,813	7.17
5-6 ..	13,291	31,938	2.40	23-24 ..	183	1,435	7.84
6-7 ..	12,374	32,188	2.60	24-25 ..	126	1,076	8.54
7-8 ..	9,816	28,696	2.92				
8-9 ..	8,041	25,771	3.20	25-26 ..	74	645	8.72
9-10 ..	5,899	20,625	3.50	26-27 ..	50	418	8.36
				27-28 ..	15	117	7.80
10-11 ..	4,955	18,458	3.73	28-29 ..	16	170	10.63
11-12 ..	4,087	16,492	4.04	29-30 ..	6	51	8.50
12-13 ..	3,446	14,616	4.24				
13-14 ..	2,691	12,098	4.50	30-31 ..	2	11	5.50
14-15 ..	2,081	9,978	4.79	31-32 ..	1	10	10.00
15-16 ..	1,681	8,561	5.09				
16-17 ..	1,332	7,188	5.40				
17-18 ..	1,107	6,307	5.70	Total ..	168,982	397,739	2.35

(iii) *Age and Average Issue of Mothers.* The following table shows the average number of children born to mothers of different ages. In the younger ages there is, naturally, little difference in the average number of children to each mother, but with the increase of the age of the mother the number of issue has fallen in comparison with past years. The average issue of mothers of all ages recorded for 1948 (namely 2.35) is 27.7 per cent. below the average of 3.25 for the years 1911-20.

AGE AND AVERAGE ISSUE OF MOTHERS : AUSTRALIA.

Period.	Age of Mother (Years).							All Ages.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and Over.	
1911-20 ..	1.21	1.75	2.61	3.74	5.11	6.69	8.16	3.25
1921-30 ..	1.20	1.71	2.46	3.48	4.80	6.27	7.74	3.04
1931-40 ..	1.20	1.68	2.30	3.19	4.41	5.89	7.40	2.71
1939 ..	1.20	1.64	2.16	2.96	4.11	5.64	6.98	2.49
1940 ..	1.21	1.62	2.14	2.88	4.03	5.48	6.92	2.45
1941 ..	1.20	1.59	2.11	2.86	3.91	5.35	7.01	2.40
1942 ..	1.18	1.57	2.12	2.86	3.85	5.26	6.82	2.39
1943 ..	1.18	1.53	2.09	2.81	3.75	5.07	6.86	2.35
1944 ..	1.17	1.56	2.15	2.84	3.69	4.89	6.18	2.42
1945 ..	1.16	1.55	2.15	2.84	3.63	4.82	6.18	2.42
1946 ..	1.15	1.54	2.13	2.81	3.60	4.60	6.04	2.36
1947 ..	1.14	1.50	2.11	2.81	3.61	4.62	6.03	2.31
1948 ..	1.17	1.56	2.20	2.87	3.61	4.56	5.49	2.35

(iv) *Previous Issue of Mothers, Various Ages.* A classification of mothers of various ages according to previous issue is given for 1948 in the following table. Corresponding figures for 1947 appear in *Demography Bulletin* No. 65:—

**NUPTIAL CONFINEMENTS: MOTHERS OF VARIOUS AGES ACCORDING TO
PREVIOUS ISSUE, AUSTRALIA, 1948.**

Previous Issue.	Age of Mother (Years.)							Total Married Mothers.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and Over.	
0	6,727	27,702	16,982	6,929	2,776	646	37	61,799
1	1,058	14,456	19,653	10,858	4,037	740	41	50,843
2	93	3,926	9,889	8,727	4,175	826	48	27,684
3	6	951	3,989	4,827	3,127	813	41	13,754
4	..	204	1,568	2,313	1,773	601	34	6,493
5	..	35	635	1,245	1,112	490	30	3,547
6	..	14	230	677	793	324	24	2,062
7	..	..	86	316	474	252	23	1,151
8	..	1	24	164	297	148	19	653
9	..	..	4	75	209	143	23	454
10	..	..	..	29	101	85	12	227
11	..	..	..	14	78	60	6	158
12	..	..	..	2	31	47	8	88
13	..	..	..	2	10	20	2	34
14	..	..	..	..	8	10	3	21
15	..	..	..	..	3	7	..	10
16	..	..	..	..	..	1	1	2
17	..	..	..	..	1	..	..	1
18	..	..	..	..	..	1	..	1
Total Married Mothers	7,884	47,289	53,060	36,178	19,005	5,214	352	168,982

(v) *Previous Issue of Mothers of Twins and Triplets.* Figures regarding the previous issue of married mothers of twins in 1948 show that 532 mothers had no previous issue either living or deceased, 580 had one child previously, 354 had two previous issue, 190 three, 99 four, 52 five, 30 six, 14 seven, 8 eight, 7 nine, 1 ten, 1 eleven and 1 twelve.

Of the 15 cases of nuptial triplets registered during 1948, 5 mothers had no previous issue, 3 had one, 2 had two, 2 had three, 1 had four, 1 had six and 1 had eight previous issue.

18. Interval Between Marriage and First Birth.—(i) *Interval.* The following table shows the interval between marriage and first birth for 1911-20, 1921-30, 1931-40, 1945, 1946, 1947 and 1948. In cases of twins and triplets, the eldest only is enumerated.

INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH : AUSTRALIA.

INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH.							
Interval.	Annual Averages.			1945.	1946.	1947.	1948.
	1911-20.	1921-30.	1931-40.				
NUMBER OF FIRST BIRTHS.							
Under 1 month ..	465	365	301	178	190	232	241
1 month ..	535	496	412	233	275	306	312
2 months ..	760	719	626	356	409	442	400
3 " ..	996	1,013	967	474	647	762	757
4 " ..	1,227	1,333	1,367	750	948	1,109	1,116
5 " ..	1,551	1,809	2,008	1,160	1,430	1,803	1,977
6 " ..	1,993	2,397	2,812	1,928	2,235	3,191	2,989
7 " ..	1,785	2,219	2,184	1,752	2,241	3,033	2,632
8 " ..	1,562	1,530	1,417	1,990	2,258	2,682	2,366
9 " ..	3,517	3,253	2,668	4,312	4,460	5,442	4,779
10 " ..	2,877	2,907	2,202	2,766	3,213	4,526	4,020
11 " ..	2,018	2,152	1,836	2,171	2,668	3,732	3,311
Total under 1 year	19,286	20,193	18,800	18,070	20,974	27,260	24,900
1-2 years ..	8,563	10,133	10,595	15,104	16,254	19,325	19,277
2-3 " ..	2,626	3,369	4,319	9,136	9,262	7,887	6,792
3-4 " ..	1,230	1,743	2,214	5,710	6,237	4,802	3,311
4-5 " ..	700	941	1,205	3,080	4,271	3,514	2,224
5-10 " ..	980	1,446	1,766	4,087	5,417	5,663	4,638
10-15 " ..	168	240	289	473	632	576	564
15-20 " ..	34	47	48	99	81	78	81
20 years and over ..	8	8	7	10	17	7	12
Total ..	33,595	38,120	39,243	55,769	63,145	69,112	61,799

PERCENTAGE OF TOTAL FIRST BIRTHS.

Under 1 month ..	1.39	0.96	0.77	0.32	0.30	0.34	0.39
1 month ..	1.59	1.30	1.05	0.42	0.44	0.44	0.50
2 months ..	2.26	1.89	1.59	0.64	0.65	0.64	0.65
3 " ..	2.96	2.66	2.46	0.85	1.02	1.10	1.22
4 " ..	3.65	3.50	3.48	1.34	1.50	1.60	1.81
5 " ..	4.62	4.75	5.12	2.08	2.26	2.61	3.20
6 " ..	5.93	6.29	7.16	3.46	3.54	4.62	4.84
7 " ..	5.32	5.82	5.57	3.14	3.55	4.39	4.26
8 " ..	4.65	4.01	3.61	3.57	3.58	3.88	3.83
9 " ..	10.47	8.53	6.80	7.73	7.06	7.87	7.73
10 " ..	8.56	7.63	5.61	4.96	5.09	6.55	6.50
11 " ..	6.01	5.64	4.68	3.89	4.22	5.40	5.36
Total under 1 year	57.41	52.98	47.90	32.40	33.21	39.44	40.29
1-2 years ..	25.49	26.58	27.00	27.08	25.74	27.96	31.19
2-3 " ..	7.82	8.84	11.01	16.38	14.67	11.41	10.99
3-4 " ..	3.66	4.57	5.64	10.24	9.88	6.95	5.36
4-5 " ..	2.08	2.47	3.07	5.52	6.76	5.09	3.60
5-10 " ..	2.92	3.79	4.50	7.33	8.58	8.20	7.51
10-15 " ..	0.50	0.63	0.74	0.85	1.00	0.83	0.91
15-20 " ..	0.10	0.12	0.12	0.18	0.13	0.11	0.13
20 years and over ..	0.02	0.02	0.02	0.02	0.03	0.01	0.02
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The masculinity of nuptial first births in 1948 was 105.72 compared with 105.36 for total births.

(ii) *Age of Mother and Interval.* Previous issue of mothers of ex-nuptial children is not recorded and for purposes of the following table all ex-nuptial births are regarded as first births. The table shows in condensed form for 1946, 1947 and 1948 the numbers of births of ex-nuptial children, of children born less than nine months after marriage and of all first-born children according to the age of mothers. Over the past few years slightly more than one-quarter of all first births were either ex-nuptial or occurred less than nine months after marriage. Of the first-born children of mothers under 20 years, however, over two-thirds came into this category. The percentage diminishes rapidly to about 17 per cent. for mothers aged 25 to 34 years and then rises perceptibly for mothers in older age-groups.

It must be remembered, of course, that a certain number of premature births is unavoidably included among the births which took place less than nine months after marriage, and they are not necessarily due to ante-nuptial conception. However, information in connexion therewith is not available and the figures in the table must be accepted with this reservation. Tabulations showing single ages of mothers of nuptial first-born children and interval after marriage are given for 1946, 1947 and 1948 in *Demography Bulletins* Nos. 64 to 66.

AGE OF MOTHER AND INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH : AUSTRALIA.

Particulars.	Age of Mother at Birth of First Child (Years).							Total.
	Under 20.	20-24.	25-29.	30-34.	35-39.	40-44.	45 and over.	
1946—								
Ex-nuptial births (a) No.	1,722	2,762	1,424	890	550	186	24	(b) 7,558
Nuptial births occurring less than 9 months after marriage .. No.	3,070	5,202	1,520	553	229	53	6	10,633
Total .. No.	4,792	7,964	2,944	1,443	779	239	30	18,191
Total first births No.	6,912	29,893	20,404	9,060	3,553	825	56	70,703
1947—								
Ex-nuptial births (a) No.	1,674	2,498	1,445	867	547	166	7	(c) 7,204
Nuptial births occurring less than 9 months after marriage .. No.	3,993	6,709	1,894	688	227	46	3	13,560
Total .. No.	5,667	9,207	3,339	1,555	774	212	10	20,764
Total first births No.	8,259	33,456	21,248	9,027	3,466	821	39	76,316
1948—								
Ex-nuptial births (a) No.	1,617	2,351	1,436	930	568	200	19	(d) 7,121
Nuptial births occurring less than 9 months after marriage .. No.	4,105	6,057	1,691	618	248	68	3	12,790
Total .. No.	5,722	8,408	3,127	1,548	816	268	22	19,911
Total first births No.	8,344	30,053	18,418	7,859	3,344	846	56	68,920
Percentage of (i) ex-nuptial births plus (ii) nuptial births occurring less than 9 months after marriage on (iii) total first births								
1911-20 .. %	81.22	49.37	28.37	25.50	30.89	37.01	49.49	43.70
1921-30 .. %	80.08	45.59	23.45	22.22	29.78	38.18	49.65	40.76
1931-40 .. %	80.06	44.75	20.49	19.41	27.78	38.43	55.57	39.34
1941 .. %	73.01	32.31	14.50	14.50	21.21	32.53	60.98	28.59
1942 .. %	69.80	29.80	13.85	15.69	21.02	30.50	46.34	27.22
1943 .. %	67.03	25.44	13.43	14.31	21.33	30.67	55.81	24.55
1944 .. %	68.90	26.39	13.77	14.95	21.09	26.90	41.67	25.35
1945 .. %	68.20	26.18	14.05	15.42	20.64	28.08	43.75	25.31
1946 .. %	69.33	26.64	14.43	15.93	21.93	28.97	53.57	25.73
1947 .. %	68.62	27.52	15.71	17.23	22.33	25.82	25.64	27.29
1948 .. %	68.58	27.98	16.98	19.70	24.40	31.68	39.29	28.81

(a) For purposes of this table all ex-nuptial births are regarded as first births. (b) Excludes 1 birth, age of mother not stated. (c) Excludes 5 births, age of mother not stated. (d) Excludes 2 births, age of mother not stated.

NOTE.—In cases of multiple first births, only one child is included.

19. Interval between Birth and Registration of Birth.—Detailed information for the years 1911 to 1921 regarding the period which elapsed between birth and registration of birth is contained in *Demography Bulletins* issued by this Bureau for those years. The average interval for 1921 was over 14 days for all children.

20. Still-births.—Reliable statistics of the number of children born dead in Australia are not available as registration of these births is not compulsory in all States. In previous issues of the Year Book estimated numbers of still-births have been given. Pending the results of investigations being made into the records of such births which may affect the accuracy of these estimates, figures for 1947 and 1948 are not available.

§ 3. Mortality.

1. Number of Deaths.—(i) Year, 1948. The following table shows the number of deaths, male and female, registered in each State during the year :—

DEATHS, 1948.

Sex.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Males ..	17,085	11,503	6,127	3,619	2,797	1,398	56	70	42,655
Females ..	13,318	10,322	4,335	3,129	1,888	1,130	17	45	34,184
Persons ..	30,403	21,825	10,462	6,748	4,685	2,528	73	115	76,839

(ii) Years 1861 to 1948. A summary of the total number of deaths in each State and Territory since 1861 is given in the following table :—

DEATHS.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Annual Average—									
1861–1865	6,312	9,890	1,150	2,168	279	1,391	..	..	21,190
1866–1870	7,293	11,027	1,863	2,593	350	1,390	..	..	24,516
1871–1875	8,182	11,952	2,574	3,095	414	1,609	..	..	27,826
1876–1880	10,651	12,562	3,457	3,605	401	1,799	..	..	32,475
1881–1885	13,221	13,362	5,146	4,323	544	1,958	..	..	38,554
1886–1890	14,291	16,929	5,608	3,873	666	2,078	..	..	43,445
1891–1895	15,300	16,411	5,316	4,100	1,086	2,025	..	..	44,397
1896–1900	15,556	16,265	5,841	4,235	2,389	2,063	..	..	46,349
1901–1905	15,900	15,349	5,862	3,913	2,731	1,932	(a) 70	..	45,757
1906–1910	15,882	14,942	5,529	3,848	2,867	2,020	77	..	45,165
1911–1915	18,802	15,921	6,907	4,495	3,045	2,010	75	(b) 12	51,267
1916–1920	20,776	16,485	7,605	4,878	3,133	1,971	81	10	54,939
1921–1925	20,379	16,176	7,412	4,880	3,231	2,090	57	9	54,234
1926–1930	22,677	16,608	8,007	5,008	3,617	2,040	71	42	58,160
1931–1935	22,591	17,680	8,147	5,063	3,876	2,194	67	35	59,653
1936–1940c	25,735	19,361	9,107	5,540	4,270	2,342	73	54	66,482
1941–1945c	27,807	20,964	9,715	6,303	4,724	2,488	64	71	72,136
Year—									
1944(c) ..	26,652	20,502	9,385	5,984	4,478	2,494	31	70	69,596
1945(c) ..	26,994	20,496	9,459	6,049	4,712	2,413	35	73	70,231
1946(c) ..	28,579	21,534	10,648	6,461	4,753	2,549	55	82	74,661
1947 ..	28,449	21,442	10,116	6,215	4,723	2,363	65	95	73,468
1948 ..	30,403	21,825	10,462	6,748	4,685	2,528	73	115	76,839

(a) Northern Territory figures included with South Australia prior to 1911. (b) Part of New South Wales prior to 1911. (c) Excludes deaths of defence personnel and of internees and prisoners of war from overseas.

2. **Crude Death-rates.**—The commonest method of measuring mortality is to relate the number of deaths for a given period to the mean population for that period, thus obtaining the crude death-rate. This rate for a given period measures the numbers per thousand of population by which the population is depleted through deaths during that period. Crude death-rates for each State and Territory from 1861 to 1948 are shown in the following table:—

CRUDE DEATH-RATES.(a)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Annual Average—									
1861-1865 ..	16.88	17.48	20.60	15.39	15.15	15.30	..	..	17.04
1866-1870 ..	16.18	16.68	18.51	14.90	14.90	14.24	..	..	16.26
1871-1875 ..	14.93	15.58	18.33	15.71	15.90	15.58	..	..	15.62
1876-1880 ..	16.18	15.26	17.84	14.78	14.12	16.54	..	..	15.86
1881-1885 ..	15.77	14.76	19.36	14.60	16.96	16.03	..	..	15.69
1886-1890 ..	13.91	16.10	15.72	12.46	15.63	15.22	..	..	14.85
1891-1895 ..	12.91	13.85	12.81	12.17	16.29	13.44	..	..	13.32
1896-1900 ..	11.91	13.73	12.45	11.93	15.59	12.46	..	..	12.75
1901-1905 ..	11.25	12.74	11.38	10.96	12.58	10.79	(b) 15.69	..	11.76
1906-1910 ..	10.11	12.01	9.90	10.16	11.03	10.77	20.99	..	10.73
1911-1915 ..	10.47	11.49	10.55	10.37	9.87	10.39	20.38	(c) 5.21	10.73
1916-1920 ..	10.58	11.38	10.75	10.65	9.91	9.83	17.41	4.26	10.77
1921-1925 ..	9.26	10.08	9.31	9.45	9.19	9.70	15.00	2.61	9.53
1926-1930 ..	9.26	9.56	9.06	8.83	8.90	9.44	15.84	5.49	9.26
1931-1935(d) ..	8.68	9.72	8.61	8.72	8.82	9.62	13.45	3.81	9.00
1936-1940(d)(e) ..	9.45	10.36	9.08	9.33	9.21	9.91	11.74	4.50	9.62
1941-1945(d)(e) ..	9.73	10.03	9.24	10.27	9.86	10.21	6.52	4.98	9.96
Year—									
1944(d)(e) ..	9.23	10.30	8.84	9.66	9.30	10.15	2.97	4.93	9.52
1945(d)(e) ..	9.25	10.21	8.79	9.65	9.67	9.71	3.33	4.86	9.50
1946(d)(e) ..	9.70	10.63	9.77	10.17	9.65	10.11	5.20	5.16	10.00
1947 ..	9.53	10.44	9.15	9.62	9.39	9.17	5.97	5.62	9.69
1948—									
Males ..	11.27	11.16	10.65	11.06	10.58	10.40	7.00	6.97	11.03
Females ..	8.80	9.75	7.91	9.45	7.54	8.68	4.06	5.54	8.89
Persons ..	10.04	10.44	9.31	10.25	9.10	9.55	5.99	6.33	9.96

(a) Number of deaths per 1,000 of mean population. (b) Northern Territory figures included with South Australia prior to 1901. (c) Part of New South Wales prior to 1911. (d) Revised rates based on mean populations adjusted in accordance with the final results of the Census of 30th June, 1947.

(e) Excludes deaths of defence personnel and of internees and prisoners of war from overseas.

3. **Standardized Death-rates.**—(i) *General.* The death-rates quoted above are crude rates, i.e., they simply show the number of deaths per thousand of mean population without taking into consideration differences in the sex and age composition of the population. Other conditions being equal, however, the crude death-rate of a community will be low if it contains a large percentage of young people (not infants), and conversely it will be relatively high if the population includes a large proportion of elderly people. The foregoing table of crude death-rates, therefore, does not indicate comparative incidence of mortality either as between States in the same year or in any one State over a period of years. In order to obtain a comparison of mortality rates on a uniform basis as far as sex and age constitution are concerned, "standardized" death-rates may be computed. These are computed by selecting a particular distribution of age and sex as a standard, and then calculating what would have been the general death-rate if the death-rates in each sex and age-group were as recorded, but the age and sex distribution the same as in the standard population. For the standardized rates which follow, the standard population compiled by the International Institute of Statistics has been used. This standard is based upon the age distribution according to sex of nineteen European countries at their Censuses nearest to the year 1900. Full details of the "Standard Population" are given in Official Year Book No. 22, p. 962.

(ii) *Death-rates in Age-groups.* The following table provides a comparison of death-rates in age-groups in each State for the latest Census year (1947) in which the ages of population in each State were accurately ascertained.

DEATH-RATES(a) IN AGE-GROUPS, 1947.

Age-group (years).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Under 1 ..	29.77	25.83	31.59	23.68	30.66	27.31	47.62	30.30	28.45
1-4 ..	1.99	1.52	2.26	1.33	2.05	1.75	1.32	0.80	1.84
5-14 ..	0.67	0.73	0.86	0.68	0.62	0.81	..	0.77	0.71
15-24 ..	1.11	1.29	1.35	1.08	1.30	1.72	2.90	0.29	1.23
25-34 ..	1.63	1.64	2.14	1.74	1.89	2.13	0.90	1.92	1.75
35-44 ..	3.07	2.88	3.60	2.88	3.22	3.11	4.29	3.82	3.10
45-54 ..	7.86	7.37	7.72	6.65	7.56	6.84	6.65	4.87	7.54
55-64 ..	17.90	17.59	16.54	16.45	16.07	15.50	14.29	15.31	17.31
65 and over	65.49	69.02	64.52	62.89	64.30	66.90	53.46	67.96	66.14
Crude Death rate (all ages) ..	9.53	10.44	9.15	9.62	9.39	9.17	5.97	5.62	9.69

(a) Number of deaths per 1,000 of population at ages shown.

It will be observed that in this particular year, while the crude death-rate for South Australia was only exceeded by that for Victoria, the rates at most individual ages were lower than for all other States.

(iii) *Comparison of Crude and Standardized Death-rates.* The relative incidence of mortality as between individual States and as between the years 1921, 1933, and 1947 is illustrated in the following statement of crude and "standardized" death-rates. These years have been chosen for comparisons because the Census data give essential information as to sexes and ages of the State population. Crude death-rates are shown to indicate the degree to which they disguise the true position.

CRUDE AND STANDARDIZED DEATH-RATES.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Crude Death-rate(a)—							
1921	9.50	10.52	9.37	10.02	10.42	10.30	9.91
1933	8.58	9.59	8.84	8.44	8.64	9.60	8.92
1947	9.53	10.44	9.15	9.62	9.39	9.17	9.69
Standardized Death-rate(b)—							
1921	10.35	10.79	10.24	10.38	11.88	10.83	10.58
1933	8.52	8.74	9.10	7.66	8.74	8.86	8.62
1947	7.44	7.31	7.47	6.77	7.28	7.21	7.34

(a) Total deaths per 1,000 of mean population.
in par. 3 (i) above.

(b) See explanation of standardized death-rates

The comparisons above relate to individual years which happened to be Census years and should not be used as the bases for general conclusions as to changes in incidence of mortality for other than those years.

(iv) *Standardized Death-rates, Australia, 1933 to 1941.* It is not possible to continue the index of mortality formerly published. As indicated in letterpress previously published the index of mortality was an unsatisfactory basis for comparison. The more reliable standardized death-rates for Australia for 1933 and later years were as follows:—1933, 8.62; 1934, 8.92; 1935, 8.83; 1936, 8.70; 1937, 8.58; 1938, 8.59; 1939, 8.73; 1940, 8.51; and 1941, 8.55. Rates for later years were not calculated as it has been impossible to obtain a satisfactory estimate of the age distribution of the population. The rate calculated for 1947 based on final Census results is 7.34.

4. *True Death-rates.*—The main objections to standardized death-rates are that the choice of a standard population is arbitrary and that the standardized rates have little value except for comparative purposes, and even then variation of the standard population may make appreciable differences. A correct measurement of the mortality of the

population can be obtained, however, from life tables. A life table represents the number of survivors at each age from an original batch of newly-born children who are subject to given mortality conditions, and from such a table the complete expectation of life at birth can be calculated. The reciprocal of this figure is known as the true death-rate, since, if the complete expectation of life of a person at birth is 50 years, say, then each person will on the average die 50 years after birth, so that in the standard population one person in 50 or 20 per thousand will die each year. The true death-rate for a given period is unaffected by the particular age distribution of that period and is determined solely by the mortality experience of the period as manifested in the rate of survivorship from each year of age to the next. The table below sets out complete expectation of life at birth and true death-rates for the periods covered by Australian life tables.

COMPLETE EXPECTATION OF LIFE AT BIRTH AND TRUE DEATH-RATES : AUSTRALIA.

Period.	Complete Expectation of Life at Birth. (Years.)		True Death-rate.	
	Males.	Females.	Males.(a)	Females.(b)
1881-1890.. .. .	47.20	50.84	21.19	19.67
1891-1900.. .. .	51.08	54.76	19.58	18.26
1901-10	55.20	58.84	18.12	17.00
1920-22	59.15	63.31	16.91	15.80
1932-34	63.48	67.14	15.75	14.89
1946-48	66.07	70.63	15.14	14.16

(a) Number of deaths per 1,000 males in life table or stationary population.

(b) Number of deaths per 1,000 females in life table or stationary population.

5. Crude Death-rates of Various Countries.—The following table gives the crude death-rate for Australia and each State thereof in comparison with the rates for various other countries.

CRUDE DEATH-RATES (a) : VARIOUS COUNTRIES.

Country.	1908-13.	1921-25.	1926-30.	1931-35.	1948.
Netherlands	13.9	10.4	9.9	8.9	7.4
Denmark	13.2	11.3	11.1	10.9	8.6
Norway	13.6	11.5	11.0	10.4	8.8
Union of South Africa (b)	(c) 10.3	9.7	9.7	9.8	8.9
New Zealand (d)	9.3	8.6	8.6	8.2	9.1
Canada	(e)	11.2	11.1	9.7	9.3
Argentina	17.5	14.4	13.3	12.1	(f) 9.4
Sweden	14.0	12.1	12.1	11.6	9.8
United States of America	(c) 14.1	11.8	11.8	(g) 10.9	9.9
Australia (h)	10.7	9.5	9.3	9.0	10.0
<i>Western Australia (h)</i>	10.3	9.2	9.1	8.8	9.1
<i>Queensland (h)</i>	10.3	9.2	8.6	8.6	9.3
<i>Tasmania (h)</i>	10.7	9.8	9.6	9.6	9.6
<i>New South Wales (h)</i>	10.3	9.3	9.4	8.7	10.0
<i>South Australia (h)</i>	10.1	9.4	8.7	8.7	10.3
<i>Victoria (h)</i>	11.7	10.1	9.6	9.7	10.4
Italy	20.4	17.4	16.0	14.1	10.5
Switzerland	15.2	12.5	12.1	11.8	10.8
Great Britain and Northern Ireland	14.5	12.4	12.3	12.2	10.9
<i>England and Wales</i>	14.1	12.2	12.1	12.0	10.8
<i>Northern Ireland</i>	16.9	15.6	14.8	14.3	11.2
<i>Scotland</i>	15.5	13.9	13.6	13.2	11.8
Spain	22.8	20.2	17.9	16.4	10.9

(a) Number of deaths per 1,000 mean population.

(b) White population only.

(c) 1911-13.

(d) Excluding Maoris.

(e) Not available.

(f) 1946.

(g) 1933-35.

(h) Excluding full-blood aboriginals.

CRUDE DEATH-RATES (a) : VARIOUS COUNTRIES—*continued*.

Country.	1908-13.	1921-25.	1926-30.	1931-35.	1948.
Finland	16.4	15.1	14.8	13.3	11.1
Hungary	(b) 22.9	19.9	17.0	15.8	11.2
Czechoslovakia	21.0	16.1	15.3	13.8	11.5
Japan	20.5	21.8	19.3	17.9	12.0
Germany	16.5	13.3	11.8	11.2	(c) 12.1
Eire	16.9	14.6	14.4	14.0	12.2
France	18.6	17.2	16.8	15.7	12.2
Belgium	15.7	13.4	13.7	12.9	12.4
Portugal	(b) 20.9	20.4	18.4	16.9	12.8
Poland	21.0	18.5	16.8	14.7	(d) 13.9
Greece	(e) 16.5	16.6	16.5	(f) 14.6	
Yugoslavia	(e) 20.2	20.0	17.9	(g) 15.0	
Ceylon	31.4	27.8	25.1	24.7	15.2
Mexico	(e) 25.5	25.6	24.8	16.3	
Chile	(b) 31.0	30.3	25.8	24.4	17.4
Rumania	24.7	23.0	21.2	20.6	(f) 21.1
Egypt	25.8	25.4	26.2	27.4	25.8

(a) Number of deaths per 1,000 mean population. (b) 1911-13. (c) 1943. (d) 1938.
 (e) Not available. (f) 1947. (g) 1939. (h) 1922-25.

6. True Death-rates of Various Countries.—The following table gives the true death-rate for Australia in comparison with the rates for various other countries :—

TRUE DEATH-RATES : VARIOUS COUNTRIES.

Country.	Period.	True Death-rate.		Country.	Period.	True Death-rate.	
		Males. (a)	Females. (b)			Males. (a)	Females. (b)
Australia (c) ..	1946-48	15.1	14.2	Union of South			
Netherlands ..	1931-40	15.2	14.9	Africa (e) ..	1935-37	17.0	15.9
Denmark ..	1941-45	15.2	14.8	Northern Ire-			
New Zealand (d)	1934-38	15.3	14.6	land ..	1936-38	17.3	16.9
Sweden ..	1936-40	15.6	14.9	Belgium ..	1928-32	17.9	16.7
Canada ..	1940-42	15.9	15.1	Scotland ..	1930-32	17.9	16.8
United States				France ..	1933-38	17.9	16.2
of America (e)	1939-41	15.9	14.9	Hungary ..	1941	18.2	17.2
Switzerland ..	1939-44	16.0	14.9	Finland ..	1941-45	18.3	16.4
Norway ..	1930-31	16.4	15.7	Austria ..	1930-33	18.4	17.1
England and				Italy ..	1930-32	18.6	17.9
Wales ..	1937	16.6	15.5	Czechoslovakia	1929-32	19.3	18.1
Germany ..	1932-34	16.7	15.9	Greece ..	1926-30	20.4	19.7
Eire ..	1940-42	17.0	16.4	Poland ..	1931-32	20.8	19.5
				Japan ..	1935-36	21.3	20.2

(a) Number of deaths per 1,000 males in life table or stationary population (see explanation on pages 614-5). (b) Number of deaths per 1,000 females in life table or stationary population (see explanation on pages 614-5). (c) Excludes full-blood aboriginals. (d) Excludes Maoris. (e) White population only.

7. Australian Life Tables.—In connexion with the Census of 1947, life tables, which have been constructed by the Commonwealth Actuary in respect of each sex for Australia as a whole, have been published as a separate Census publication and are also dealt with in the Appendix hereinafter. Monetary tables on single and joint lives based thereon

are to be published by the Commonwealth Actuary. References to earlier Australian life tables appear in Official Year Book No. 20, pp. 962 and 969-73 and Official Year Book No. 29, p. 928.

8. **Infantile Deaths and Death-rates.**—(i) *Australia*, 1901 to 1948. The universal experience that during the first few years of life the higher death-rate of male infants tends to counteract the excess of male births is confirmed by the fact that out of 436,896 male infants born from 1944 to 1948, 14,168 (32.43 per 1,000) died during the first year of life, while of 413,747 female infants only 10,615 (25.66 per 1,000) died during the first year. Still-births are not included in any of the tables relating to deaths.

INFANTILE DEATHS AND DEATH-RATES : AUSTRALIA.

Period.	Number of deaths under one year.			Rate of Infantile Mortality.(a)		
	Males.	Females.	Total.	Males.	Females.	Total.
Annual Average—						
1901-05 ..	5,499	4,448	9,947	104.25	88.83	96.91
1906-10 ..	4,881	3,821	8,702	84.78	70.02	77.61
1911-15 ..	5,274	4,063	9,337	77.65	62.65	70.32
1916-20 ..	4,757	3,597	8,354	71.63	57.31	64.67
1921-25 ..	4,474	3,394	7,868	64.23	51.21	57.88
1926-30 ..	3,909	2,942	6,851	57.66	45.99	51.99
1931-35 ..	2,649	1,986	4,635	46.00	36.29	41.27
1936-40 ..	2,679	2,016	4,695	43.23	34.16	38.81
1941-45 ..	2,921	2,215	5,136	39.11	31.18	35.24
1944 ..	2,728	2,078	4,806	34.82	27.71	31.34
1945 ..	2,685	2,032	4,717	32.56	26.02	29.38
1946 ..	2,922	2,194	5,116	32.12	25.69	29.01
1947 ..	2,977	2,225	5,202	31.73	25.12	28.52
1948 ..	2,856	2,086	4,942	31.28	24.07	27.77

(a) Number of deaths under 1 year per 1,000 live births registered.

(ii) *States*, 1901 to 1948. For each State and Territory the rates of infantile mortality during the period 1901 to 1948 were as follows :—

INFANTILE MORTALITY RATES (a) : UNDER ONE YEAR.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1901-05..	97.02	95.91	94.35	86.70	124.79	90.00	149.35	(b)	96.91
1906-10..	77.30	79.90	71.27	68.38	89.80	83.18	143.79	(b)	77.61
1911-15..	71.05	72.23	65.68	67.26	72.43	70.91	85.11	32.56	70.32
1916-20..	64.82	67.18	63.04	61.93	61.73	63.84	67.15	40.40	64.67
1921-25..	58.11	61.93	50.99	54.19	59.14	60.44	40.82	60.24	57.88
1926-30..	54.74	52.34	47.41	46.95	49.27	53.37	66.09	71.31	51.99
1931-35..	41.92	42.76	39.46	35.12	40.81	44.47	80.60	634.48	41.27
1936-40..	41.18	37.63	36.75	33.08	39.70	41.23	44.80	21.78	38.81
1941-45..	36.29	34.73	34.55	33.20	33.37	39.54	55.97	18.75	35.24
1944 ..	30.68	31.96	31.32	29.07	32.57	38.27	22.47	23.44	31.34
1945 ..	30.63	28.03	29.76	28.08	29.52	27.48	55.56	12.35	29.38
1946 ..	30.22	27.16	29.27	27.07	31.06	30.23	30.30	19.31	29.01
1947 ..	29.81	26.28	30.82	24.27	30.92	27.31	43.48	19.85	28.52
1948 ..	30.30	23.93	27.96	29.74	25.60	27.65	35.71	23.45	27.77

(a) Number of deaths under 1 year per 1,000 live births registered. (b) Part of New South Wales prior to 1911. (c) Based on deaths of infants born in the Australian Capital Territory. See footnote page 596.

INFANTILE MORTALITY RATES (a) : UNDER ONE MONTH.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1901-05 ..	33.11	34.49	32.13	30.73	37.09	33.54	(b)	(c)	33.46
1906-10 ..	31.47	32.45	30.87	26.83	30.74	29.17	(b)	(c)	31.10
1911-15 ..	31.75	33.07	30.73	29.07	30.87	32.68	38.30	23.26	31.69
1916-20 ..	32.12	33.57	29.62	29.43	29.43	31.48	40.77	35.35	31.70
1921-25 ..	29.97	32.19	27.44	27.83	27.56	31.73	11.66	18.07	29.91
1926-30 ..	29.63	29.75	27.66	26.84	25.10	33.12	14.37	28.86	28.96
1931-35 ..	27.62	27.78	27.91	22.99	25.11	30.09	35.26	23.45	27.19
1936-40 ..	27.63	25.94	26.15	21.62	22.62	29.56	28.80	16.33	26.27
1941-45 ..	24.52	24.40	24.41	20.86	20.60	27.24	33.57	12.54	23.97
1944 ..	21.96	23.09	21.70	19.31	21.35	25.00	22.47	23.44	22.04
1945 ..	21.79	21.11	23.96	21.17	20.43	20.74	33.34	7.41	21.77
1946 ..	21.97	20.22	22.31	18.85	21.15	23.07	30.30	15.45	21.23
1947 ..	21.45	19.59	21.44	17.90	19.97	20.73	25.36	16.80	20.51
1948 ..	21.33	17.14	20.21	19.28	19.10	20.06	10.71	17.93	19.64

(a) Number of deaths of children aged under one month per 1,000 live births registered. (b) Not available. (c) Part of New South Wales prior to 1911. (d) Based on deaths of infants born in the Australian Capital Territory. See footnote, page 596.

INFANTILE MORTALITY RATES (a) : ONE MONTH AND UNDER ONE YEAR.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1901-05 ..	63.91	61.42	62.22	55.97	87.70	56.46	(b)	(c)	63.45
1906-10 ..	45.83	47.45	40.40	41.55	59.06	54.01	(b)	(c)	46.51
1911-15 ..	39.30	39.16	34.95	38.19	41.56	38.23	46.81	9.30	38.63
1916-20 ..	32.70	33.61	33.42	32.50	32.30	32.36	26.38	5.05	32.97
1921-25 ..	28.14	29.74	23.55	26.36	31.58	28.71	29.16	42.17	27.97
1926-30 ..	25.11	22.59	19.75	20.11	24.17	20.25	51.72	42.45	23.03
1931-35 ..	14.30	14.98	11.55	12.13	15.70	14.38	45.34	11.03	14.00
1936-40 ..	13.55	11.69	10.60	11.46	17.08	11.67	16.00	5.45	12.62
1941-45 ..	11.77	10.33	10.14	12.34	12.77	12.30	22.40	6.21	11.27
1944 ..	8.72	8.87	9.62	9.76	11.22	13.27	..	..	9.30
1945 ..	8.84	6.92	5.80	6.91	9.09	6.74	2.22	4.94	7.61
1946 ..	8.25	6.94	6.96	8.22	9.91	7.16	..	3.86	7.76
1947 ..	8.36	6.69	9.38	6.37	10.95	6.58	18.12	3.05	8.01
1948 ..	8.97	6.79	7.75	10.46	6.50	7.59	25.00	5.52	8.13

(a) Number of deaths of children aged one month and under one year per 1,000 live births registered. (b) Not available. (c) Part of New South Wales prior to 1911. (d) Based on deaths of infants born in the Australian Capital Territory. See footnote, page 596.

These tables indicate the striking decrease in infantile mortality in Australia since the beginning of the century, the number of deaths of children aged under one year per thousand births for 1948 being less than one-third of the average rate for 1901-05. The two tables above reveal the fact that this improvement was due almost entirely to the decrease in deaths from preventable causes, the mortality rate for children aged one month but under one year declining by 87 per cent. while that for children aged under one month declined by only 41 per cent.

A further indication of the considerable improvement in the infantile mortality rate may be obtained from the following figures. During the years 1940 to 1948, of 536,739 children born, 525,755 survived the first month of life and 521,479 the first year of life. Had the high infantile mortality rate of 1901 to 1905 obtained during this period only 518,780 children would have survived the first month of life and only 484,723 the first year of life.

(iii) *Districts.* The total numbers of births and of deaths of children under one year of age for 1948 are shown in *Demography Bulletin* No. 66 for each of the sixty-five districts for which vital statistics have been tabulated.

(iv) *Various Countries and Cities.* Compared with other countries Australia occupies a very favourable position in regard to infantile mortality. In 1948 only New Zealand and Sweden recorded a lower rate than Australia.

A study of the respective rates shows that a high birth-rate is often, though not invariably, accompanied by a high infantile death-rate.

INFANTILE MORTALITY RATES: VARIOUS COUNTRIES.

Country.	Infantile Mortality Rate.(a)						Crude Birth-rate (b) 1948.
	1906-15.	1921-25.	1926-30.	1931-35.	1936-40.	1948.	
New Zealand (c)	61	43	37	32	32	22	25.5
Sweden	74	60	58	50	42	23	18.4
Australia (d)	74	58	52	41	39	28	23.1
Victoria (d)	76	62	52	43	38	24	22.1
Western Australia (d)	81	59	49	41	40	26	25.1
Tasmania (d)	77	60	53	44	41	28	26.4
Queensland (d)	68	51	47	39	37	28	24.8
South Australia (d)	68	54	47	35	33	30	24.1
New South Wales (d)	74	58	55	42	41	30	22.2
Netherlands	115	64	56	45	37	29	25.3
United States of America ..	(e)	74	68	59	51	32	24.4
Norway	(e)	52	49	45	(f) 40	(g) 35	20.6
Denmark	103	82	82	71	60	35	20.3
Switzerland	108	65	54	48	45	36	19.0
Great Britain and Northern Ireland ..							
Ireland	(e)	78	70	65	59	36	18.1
England and Wales	113	76	68	62	56	34	17.9
Northern Ireland	92	82	79	78	77	44	21.7
Scotland	113	92	85	81	76	45	19.3
Union of South Africa (h) ..	(i) 91	73	67	63	53	37	27.0
Canada	(e)	98	93	75	64	42	26.9
Eire	92	69	70	68	69	49	21.9
France	122	95	89	73	70	51	20.8
Finland	(i) 112	96	88	72	72	52	26.9
Belgium	139	100	95	82	77	65	17.3
Germany	168	122	94	74	63	(j) 66	(k) 16.0
Spain	156	143	124	113	121	69	23.0
Italy	144	127	119	105	103	70	21.6
Japan	151	159	137	120	(l) 112	(m) 76	34.0
Argentina	(e)	116	113	97	96	(g) 79	(g) 24.3
Czechoslovakia	(e)	155	147	130	(l) 122	83	23.3
Ceylon	(i) 207	190	175	182	160	92	40.5
Portugal	(e)	146	146	146	135	100	26.3
Greece	(e)	(e)	(e)	122	(l) 112	(n) 101	(m) 29.1
Mexico	(e)	(o) 223	173	134	127	103	43.1
Hungary	(i) 198	187	172	157	131	(m) 111	19.1
Poland	(e)	(e)	147	137	(l) 139	(p) 140	(k) 24.6
Yugoslavia	(e)	(e)	151	153	(l) 141	(q) 144	(g) 25.9
Egypt	(e)	144	152	165	163	(r) 153	(r) 42.6
Chile	(i) 301	265	229	248	234	160	33.6
Rumania	(i) 195	201	192	182	180	(n) 199	(m) 22.4

(a) Number of deaths under 1 year per 1,000 births registered. (b) Number of births per 1,000 mean population. (c) Excluding Maoris. (d) Excluding full-blood aboriginals. (e) Not available. (f) 1935-39. (g) 1946. (h) White population only. (i) 1911-13. (j) 1942. (k) 1943. (l) 1935-38. (m) 1947. (n) 1940. (o) 1922-25. (p) 1938. (q) 1939. (r) 1945.

In 1948 the Australian cities, Hobart, Perth, Melbourne, Sydney and Adelaide were among the ten cities having the lowest rates in the following list. The list is headed by Stockholm (10), Oslo (22) and Hobart (22), the next seven cities being Perth, Melbourne, Amsterdam, New York, Sydney, Chicago and Adelaide. Of the cities named, Madras had the highest rate, 238. This rate, however, was for the year 1939.

INFANTILE MORTALITY RATES (a) : VARIOUS CITIES.

City.	Infantile Mortality Rate.(a)		City.	Infantile Mortality Rate.(a)	
	1921.	1948.		1921.	1948.
Stockholm	61	19	Sheffield	99	(h) 41
Oslo	54	22	Philadelphia	78	(c) 42
Hobart (b)	75	22	Montreal	158	45
Perth (b)	81	23	Los Angeles	68	(c) 45
Melbourne (b) ..	74	24	Dublin	123	46
Amsterdam	54	26	Dresden	115	(i) 48
New York City ..	72	26	Washington	83	(c) 48
Sydney (b)	62	27	Hamburg	95	(i) 50
Chicago	84	28	Leipzig	136	(i) 50
Adelaide (b) ..	74	29	Antwerp	98	(c) 50
Toronto	91	29	Leeds	98	(h) 50
Brisbane (b) ..	62	30	Paris	95	51
San Francisco ..	50	(c) 30	Rome	(g)	56
Detroit	83	31	Glasgow	106	56
London	80	31	Breslau	170	(i) 58
Copenhagen ..	67	33	Manchester	94	(h) 60
Wellington (d) ..	61	(c) 33	Belfast	115	(h) 60
Christchurch (d) ..	54	(e) 33	Cologne	140	(i) 66
Cape Town (f) ..	82	33	Liverpool	105	(h) 69
Johannesburg (f) ..	101	33	Munich	126	80
Aberdeen	108	33	Lisbon	(g)	(h) 98
Edinburgh	96	34	Berlin	135	h 121
Auckland (d) ..	54	(e) 35	Cairo	(g)	(h) 174
Geneva	(g)	37	Bombay	402	(c) 213
Birmingham ..	82	(h) 40	Madras	281	(c) 238

(a) Number of deaths under 1 year per 1,000 births registered. (b) Excluding full-blood aboriginals.
 (c) 1939. (d) Excluding Maoris. (e) 1944. (f) White population only. (g) Not available. (h) 1947. (i) 1938.

(v) *Causes of Deaths of Children under one Year.* The following table shows for 1948 the ages of all children who died under one year of age from each of twenty-three causes. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65. The infantile mortality rates for all births are shown for 1911, 1921, 1931, 1941 and 1948 and for ex-nuptial births for 1925, 1931, 1941 and 1948. Full particulars of the causes of death of all children who died in 1948 under one year and also of those under one month are given for each State and Territory in *Demography Bulletin* No. 66. This contains, in addition, detailed information for Australia as to the age at which children died from each cause of death.

In 1948, pre-natal influences, such as congenital malformations, congenital debility and premature birth, together with injuries at birth and other diseases of early infancy accounted for 3,477 or 70 per cent. of all deaths under one year; and of these 3,477 deaths, 2,832 or 81 per cent., occurred less than a week after birth. Among the survivors of the first week, broncho-pneumonia caused the greatest number of deaths attributable to a specific disease. This disease was responsible for 365 deaths, representing 7 per cent. of all deaths under one year, or 2.05 per 1,000 births. Diarrhoea and enteritis caused 296 deaths and other pneumonia 158.

CAUSES OF DEATH OF CHILDREN UNDER ONE YEAR : AUSTRALIA, 1948.

Cause of Death.	Age at Death.													Total under 1 year		
	Under 1 week.	1 week.	2 weeks.	3 weeks.	1 month.	2 months.	3 months.	4 months.	5 months.	6 months.	7 months.	8 months.	9 months.		10 months.	11 months.
Cerebro-spinal Meningococcal Men- ingitis .. .. .	..	..	..	1	2	..	..	2	1	5	3	3	2	2	2	23
Whooping Cough .. .. .	..	1	..	1	10	7	9	5	5	3	4	2	..	4	..	51
Diphtheria .. .. .	..	..	..	..	..	1	..	..	..	..	..	5	1	..	5	12
Erysipelas .. .. .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Respiratory Tuberculosis .. .. .	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1	3
Tuberculosis of Meninges .. .. .	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	2
Tuberculosis, Other Forms .. .. .	..	..	..	..	..	..	..	..	1	..	1	1	..	..	1	5
Syphilis .. .. .	..	1	1	..	1	3	1	..	1	..	..	..	..	..	..	8
Measles .. .. .	..	..	..	1	..	1	..	..	1	2	2	3	2	1	5	18
Scarlet fever (Non-meningococcal) convulsions	4	3	..	..	10	1	4	1	1	4	4	..	3	1	1	37
Croup	3	1	..	..	2	1	..	..	1	1	1	..	1	1	1	13
Whooping Cough .. .. .	..	..	1	..	1	..	1	1	..	..	..	..	..	..	..	5
Pneumonia, broncho-pneumonia	54	28	22	16	44	33	21	23	18	26	17	15	18	15	15	365
Pneumonia, Other	38	12	8	8	14	8	14	7	5	9	9	7	7	6	6	158
Other Diseases of the Stomach	1	..	..	..	1	1	..	..	..	..	..	1	..	..	1	5
Diarrhoea and Enteritis	2	6	16	10	38	23	35	37	24	26	20	16	15	15	13	296
Intestinal and Intestinal Obstruction	18	4	1	2	7	4	3	3	3	3	3	3	3	3	1	61
Congenital Malformations	305	60	32	15	54	46	36	23	20	20	11	11	4	18	9	664
Congenital Debility	50	3	4	3	7	6	4	3	1	1	1	..	..	2	2	96
Premature Birth	1,516	62	32	12	8	2	2	..	1	..	..	..	..	..	..	1,635
Injury at Birth	541	32	15	6	10	2	..	..	..	..	2	..	..	..	..	608
Other Diseases of Early Infancy	411	20	6	2	9	2	3	2	2	2	3	2	1	..	..	474
Other Causes	46	12	13	15	39	41	29	26	26	32	22	33	19	26	24	493
Total	2,999	254	150	93	256	183	163	133	111	134	103	104	77	95	87	4,942

	All Children.					Ex-nuptial Children.(a)					No. of Deaths 1948.
	No. of Deaths per 1,000 Total Births.					No. of Deaths per 1,000 Ex-nuptial Births.					
	1911.	1921.	1931.	1941.	1948.	1925.	1931.	1941.	1948.		
Cerebro-spinal Meningococcal Meningitis	..	0.03	0.08	0.16	0.13	0.48	0.17	0.39	0.42	3	
Whooping Cough	1.57	1.97	1.58	1.27	0.29	2.06	1.71	1.94	0.42	3	
Diphtheria	0.25	0.59	0.25	0.13	0.07	0.32	0.34	..	0.14	1	
Erysipelas	0.16	0.24	0.11	0.04	..	0.16	..	0.19	..	..
Respiratory Tuberculosis	0.08	0.07	0.03	0.04	0.02	..	..	..	..	..
Tuberculosis of Meninges	0.31	0.18	0.22	0.10	0.01	0.32	0.34	0.19	..	..
Tuberculosis, Other Forms	0.22	0.08	0.04	0.05	0.03	..	..	0.19	0.14	1
Syphilis	0.85	0.56	0.20	0.09	0.04	1.27	0.51	0.77	0.28	2	
Measles	0.34	0.15	0.10	0.01	0.10	0.16	0.51	..	0.28	2	
Scarlet Fever (Non-meningococcal)	1.83	1.10	0.32	0.30	0.21	0.32	..	0.19	0.50	4	
Convulsions	2.55	1.45	0.39	0.17	0.07	2.38	0.51	0.39	0.14	1	
Croup	2.34	1.50	0.32	0.11	0.03	0.48	0.86	..	..	..
Whooping Cough	2.86	3.08	2.82	2.96	2.05	8.09	5.11	4.65	2.37	17	
Pneumonia, Other	1.90	2.08	1.62	1.42	0.89	2.38	3.43	2.32	1.81	13	
Other Diseases of the Stomach	0.47	0.71	0.13	0.05	0.03	1.11	0.34	0.19	..	..
Diarrhoea and Enteritis	16.99	15.01	3.26	2.07	1.66	19.18	8.39	4.26	4.88	35	
Intestinal and Intestinal Obstruction	0.72	0.57	0.41	0.19	0.34	0.47	0.17	0.39	0.14	1	
Congenital Malformations	2.99	3.74	4.23	4.63	3.73	3.64	4.28	4.06	2.79	20	
Congenital Debility (b)	22.41	7.64	2.60	1.98	0.54	9.51	7.19	3.48	0.97	7	
Premature Birth	..	15.29	14.04	12.41	9.19	20.93	21.92	18.00	11.85	85	
Injury at Birth	..	..	2.81	4.27	3.42	1.90	3.08	5.23	4.04	29
Other Diseases of Early Infancy	4.07	5.53	3.29	4.14	2.66	2.60	3.77	4.45	2.00	15	
Other Causes	5.58	4.16	3.29	3.13	2.26	6.98	5.82	7.55	4.04	29	
Total	68.49	65.73	42.14	39.72	27.77	84.83	68.65	58.83	37.36	268	

(a) Included in figures for all children.

(b) Includes Icterus and Sclerema prior to 1931.

(vi) *Deaths of Ex-nuptial Children under one Year.* The deaths of ex-nuptial children were tabulated by this Bureau for the first time in 1925. The numbers of deaths of these children in 1948 and the rates in respect of 1925, 1931, 1941 and 1948 are shown in the preceding table. Corresponding figures for 1947 may be obtained from *Demography*

Bulletin No. 65. Full particulars of the causes of death of ex-nuptial children who died in 1948 aged under one year and also of those under one month are given for each State and Territory in *Demography Bulletin* No. 66. This contains, in addition, detailed information for Australia as to the age at which ex-nuptial children died from each cause of death.

Pre-natal influences, such as congenital malformations, congenital debility and premature birth, together with injuries at birth and other diseases of early infancy accounted for 156 or 58 per cent., diarrhoea and enteritis for 35 or 13 per cent., and broncho-pneumonia for 17 or 6 per cent. of the total deaths of ex-nuptial children under 1 year.

9. Deaths in Age-groups.—A distribution into age-groups has been made of the 364,795 deaths which occurred in Australia during the five years ended 1948, and the results are shown in the following table :—

AGGREGATE DEATHS IN AGE-GROUPS : AUSTRALIA, 1944 TO 1948.

Age-group (Years).	Number of Deaths.			Percentage of Total.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
Under 1	14,168	10,615	24,783	7.06	6.47	6.79
1-4	3,249	2,542	5,791	1.62	1.55	1.59
5-19	4,786	2,893	7,679	2.38	1.76	2.11
20-39	10,918	10,325	21,243	5.44	6.29	5.82
40-59	41,330	28,291	69,621	20.59	17.25	19.08
60-64	21,038	13,323	34,361	10.48	8.12	9.42
65 and over ..	105,197	96,056	201,253	52.41	58.55	55.17
Age unspecified ..	52	12	64	0.02	0.01	0.02
Total	200,738	164,057	364,795	100.00	100.00	100.00

A table showing the corresponding percentages for earlier periods from the year 1901 has been added to show the movement over a longer term. The most striking change is the substantial decrease in the group "under 1 year". At the other end of the table, the group "65 years and over" has increased considerably. The percentages in all age-groups under 40 have fallen and those in all age-groups from 40 onwards have risen. These changes are due partly to improvement in the efficiency of medical science and partly to changes in the age distribution of the population. The latter changes are themselves in part due to increased length of life made possible by medical science, and in part to changes in the volume of migration and the falling birth-rate :—

DEATHS IN AGE-GROUPS : PERCENTAGES, AUSTRALIA.

Period.	Age-group (Years).								Total.
	Under 1.	1-4.	5-19.	20-39.	40-59.	60-64.	65 and over.	Unspec- ified.	
♂ MALES.									
1901-10	19.80	5.84	5.84	13.85	19.70	5.71	29.08	0.18	100.00
1911-20	16.44	5.65	5.18	13.44	22.16	6.83	30.11	0.19	100.00
1921-30	13.18	4.35	4.86	11.00	21.76	9.01	35.71	0.13	100.00
1931-40	7.53	2.49	4.02	8.79	21.67	8.95	46.50	0.05	100.00
♀ FEMALES.									
1901-10	21.47	7.28	7.08	16.54	15.67	4.77	27.15	0.04	100.00
1911-20	16.95	6.69	5.92	15.79	17.85	5.31	31.44	0.05	100.00
1921-30	12.98	4.72	4.85	13.59	18.96	7.27	37.61	0.02	100.00
1931-40	7.22	2.66	3.58	10.10	19.11	7.60	49.72	0.01	100.00
PERSONS.									
1901-10	20.51	6.45	6.37	14.99	17.99	5.31	28.26	0.12	100.00
1911-20	16.66	6.00	5.49	14.44	20.32	6.19	30.68	0.13	100.00
1921-30	13.70	4.51	4.85	12.12	20.55	8.26	36.53	0.08	100.00
1931-40	7.40	2.56	3.83	9.36	20.54	8.36	47.92	0.03	100.00

10. Deaths at Single Ages and in Age-groups.—(i) *General.* The deaths registered in Australia in 1947 and 1948 will be found tabulated in groups of five years for each State and Territory and in single ages for Australia in *Demography Bulletins* Nos. 65-66, respectively. The deaths during the first fifteen years of life have been tabulated there in single ages and for the first year of life in shorter periods. A summary for Australia for 1948 is given in the following table:—

DEATHS AT SINGLE AGES AND IN AGE-GROUPS: AUSTRALIA, 1948.

Age at Death.	Males.	Fe- males.	Persons.	Age at Death.	Males.	Fe- males.	Persons.
Under 1 week ..	1,760	1,239	2,999	Total 5-9 years ..	279	193	472
1 week and under 2 ..	142	112	254	" 10-14 " ..	213	127	340
2 weeks and under 3 ..	90	60	150	" 15-19 " ..	395	147	542
3 weeks and under 1 month ..	54	39	93	" 20-24 " ..	581	277	858
Total under 1 month	2,046	1,450	3,496	" 25-29 " ..	530	412	942
1 month and under 3 ..	246	193	439	" 30-34 " ..	586	508	1,094
3 months and under 6 ..	214	193	407	" 35-39 " ..	755	638	1,393
6 months and under 12 ..	350	250	600	" 40-44 " ..	1,098	814	1,912
Total under 1 year ..	2,856	2,086	4,942	" 45-49 " ..	1,628	1,086	2,714
1 year ..	296	237	533	" 50-54 " ..	2,334	1,642	3,976
2 years ..	162	106	268	" 55-59 " ..	3,671	2,216	5,887
3 " ..	103	68	171	" 60-64 " ..	4,575	2,796	7,371
4 " ..	80	52	132	" 65-69 " ..	5,103	3,451	8,554
Total under 5 years	3,497	2,549	6,046	" 70-74 " ..	5,065	4,210	9,275
				" 75-79 " ..	5,132	4,794	9,926
				" 80-84 " ..	4,066	4,332	8,398
				" 85-89 " ..	2,342	2,829	5,171
				" 90-94 " ..	656	982	1,638
				" 95-99 " ..	117	160	277
				" 100 and over ..	12	14	26
				Age unspecified ..	20	7	27
				Total all ages ..	42,655	34,184	76,839

(ii) *Rates.* The following table gives the average annual death-rates in age-groups per 1,000 living for the period 1946 to 1948, i.e., the Census year 1947 and the years immediately preceding and following. Deaths in the Northern Territory and the Australian Capital Territory are included in the total for Australia but not in any of the States. Similar details for the years 1932 to 1934 are given in Official Year Book No. 37, p. 778.

AVERAGE ANNUAL DEATH-RATES: AGE-GROUPS, 1946-48.

Age-group (Years).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
MALES.							
0-4 ..	9.80	8.18	9.39	8.08	9.32	9.13	9.11
5-9 ..	0.93	0.85	0.90	1.00	0.89	1.15	0.92
10-14 ..	0.78	0.70	0.99	0.66	0.61	0.67	0.77
15-19 ..	1.43	1.25	1.53	1.46	1.45	1.62	1.41
20-24 ..	1.61	1.64	2.97	1.42	2.18	2.10	1.72
25-29 ..	1.54	1.58	2.16	1.59	1.96	2.12	1.70
30-34 ..	1.94	1.86	2.43	1.88	2.29	2.27	2.02
35-39 ..	2.68	2.43	3.05	2.41	2.46	3.10	2.65
40-44 ..	4.24	3.88	4.55	3.65	4.15	3.93	4.12
45-49 ..	7.25	6.32	7.35	6.11	6.25	5.88	6.79
50-54 ..	12.01	10.93	11.56	10.76	11.45	9.52	11.42
55-59 ..	18.57	16.98	17.83	16.25	17.21	16.98	17.68
60-64 ..	28.82	27.08	27.20	26.04	26.26	23.87	27.54
65-69 ..	44.08	42.18	41.15	40.14	40.25	41.82	42.45
70-74 ..	64.76	64.27	64.46	60.98	60.96	58.43	63.72
75-79 ..	100.79	100.40	96.25	97.77	98.74	103.22	99.68
80-84 ..	150.89	147.72	149.92	145.27	149.45	156.64	149.29
85-89 ..	230.47	228.78	233.66	224.18	222.41	256.56	230.19
90 and over	352.09	340.39	353.90	353.49	376.24	434.21	353.03

AVERAGE ANNUAL DEATH-RATES: AGE-GROUPS, 1946-48—*continued.*

Age-group (Years).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
FEMALES.							
0-4 ..	7.32	6.40	7.55	7.12	7.92	7.24	7.14
5-9 ..	0.65	0.61	0.84	0.55	0.50	0.69	0.64
10-14 ..	0.55	0.48	0.54	0.40	0.63	0.39	0.52
15-19 ..	0.61	0.66	0.79	0.73	0.65	1.46	0.70
20-24 ..	0.93	1.10	1.31	1.05	1.15	1.79	1.08
25-29 ..	1.49	1.37	1.62	1.65	1.54	1.74	1.50
30-34 ..	1.70	1.65	2.26	1.90	1.55	1.90	1.78
35-39 ..	2.40	2.16	2.84	2.02	2.58	2.59	2.38
40-44 ..	3.30	3.05	3.73	3.46	3.11	3.51	3.29
45-49 ..	4.83	4.81	5.17	4.60	5.09	4.66	4.86
50-54 ..	7.75	7.86	7.55	7.12	6.81	7.84	7.64
55-59 ..	10.58	11.00	10.97	10.34	10.08	10.03	10.69
60-64 ..	16.91	16.92	15.70	14.97	16.13	17.30	16.52
65-69 ..	26.69	27.10	24.91	25.25	24.56	27.35	26.34
70-74 ..	45.61	45.83	42.82	42.17	40.75	49.47	44.85
75-79 ..	75.11	77.96	73.20	71.95	74.21	77.00	75.57
80-84 ..	127.63	127.91	128.69	121.57	117.55	123.49	126.50
85-89 ..	197.30	201.38	205.74	192.69	187.50	198.35	198.78
90 and over	320.38	306.09	342.18	292.43	273.81	317.76	312.54

PERSONS.

0-4 ..	8.59	7.31	8.49	7.61	8.64	8.21	8.15
5-9 ..	0.79	0.73	0.87	0.78	0.70	0.92	0.78
10-14 ..	0.67	0.59	0.77	0.53	0.62	0.53	0.65
15-19 ..	1.03	0.96	1.17	1.10	1.05	1.54	1.06
20-24 ..	1.27	1.37	1.70	1.23	1.67	1.94	1.40
25-29 ..	1.52	1.47	1.90	1.62	1.74	1.93	1.60
30-34 ..	1.82	1.75	2.35	1.89	1.92	2.09	1.90
35-39 ..	2.54	2.29	2.95	2.21	2.51	2.85	2.52
40-44 ..	3.78	3.47	4.17	3.56	3.69	3.73	3.72
45-49 ..	6.04	5.56	6.31	5.36	5.73	5.28	5.84
50-54 ..	9.81	9.33	9.59	8.84	9.22	8.65	9.48
55-59 ..	14.59	13.90	14.59	13.24	13.80	13.44	14.19
60-64 ..	22.78	21.71	21.71	20.32	21.35	20.53	21.94
65-69 ..	35.02	34.00	33.14	32.22	32.58	34.56	34.05
70-74 ..	54.40	53.87	53.44	50.71	50.78	53.80	53.52
75-79 ..	86.75	87.62	84.56	83.24	86.62	89.78	86.53
80-84 ..	138.08	136.24	139.18	131.40	133.24	138.41	136.64
85-89 ..	211.40	212.11	219.04	205.12	204.10	222.49	211.97
90 and over	332.35	318.37	347.45	314.38	312.27	366.12	327.92

11. *Deaths of Centenarians.*—In previous issues of the Official Year Book, up to and including No. 33, particulars were given concerning persons aged 100 years and upwards who died each year. However, while the Registrars-General of the various States verify the ages as far as possible, absolute reliance cannot be placed on the accuracy of the information owing to the well-known tendency of very old people to overstate their ages, and it has been considered advisable to discontinue publication of this table. In

connexion with this question it may be noted that while parish registers in the United Kingdom often date very far back, compulsory registration of births dates practically from 1874 only, the Act of 1836 having left many loopholes for those unwilling to register the births of their children.

12. Length of Residence in Australia of Persons who Died.—Since 1940 the tabulation respecting the length of residence in Australia of all persons whose deaths were registered during the year has been discontinued. Details for the year 1940 appear in *Official Year Book No. 37*, pp. 779–80.

13. Birthplaces of Persons who Died.—A table giving a summary of birthplaces of persons whose deaths were registered in 1911 and 1940 will be found in *Official Year Book No. 34*, p. 337. More detailed information will be found in *Demography Bulletin No. 58*. Tabulations were discontinued for the years 1941 to 1945 inclusive but were revived for 1946. Details for 1948 appear in *Demography Bulletin No. 66*.

14. Occupation of Males who Died.—A table showing occupations of males who died during 1948 appears in *Demography Bulletin No. 66*.

15. Causes of Deaths.—(i) *General.* The classification adopted by this Bureau is that of the International Institute of Statistics, as amended by the Committees of Revision which met in Paris in 1909, 1920, 1929 and 1938.

(ii) *Mortality Statistics for 1907 and Subsequent Years.* The statistics relating to causes of death in Australia from 1907 onward have been tabulated in this Bureau in accordance with the above-mentioned classification, and the system is employed also in the State statistical offices. Particulars from 1940 onward have been tabulated on the 1938 revision of the International List.

(iii) *Classification of Causes of Death, according to the Intermediate and the Abridged International Classifications.* An abridged classification, which enumerates forty-three diseases and groups of diseases according to the revised classification, was formerly in use in many European countries and American States, and a table has been given in past issues of the *Official Year Book* showing the causes of death according to the abridged classification, so that the results may be compared with those of other countries which used the abridged index.

As the result of an international treaty signed in London in 1934, the intermediate classification of causes of death, or the “minimum nomenclature” covering 87 main causes or groups of causes, has now been adopted in most countries for the purpose of making international comparisons. This classification appears in the pages following and shows the number of deaths during 1948 in Australia for each cause enumerated. To preserve continuity with former statistics, particulars for 1948 have been compiled in the abridged form and are shown on p. 632 in conjunction with those for the previous four years, and averages over five-yearly periods to 1941–45 are shown in the same form on p. 633.

The compilations for the years 1944 to 1948 will be found in full detail in *Demography Bulletins Nos. 62 to 66*. In the following tables in which the intermediate classification has been employed, tables A, B and C show deaths of males, females and persons, respectively, for 1948. Table D shows in the abridged form, on the basis of the 1938 revision of the International List, the number of persons who died in each of the years 1944 to 1948 and gives the rate per million of population for the last-named year.

Since death-rates are subject to continual fluctuation, it is unsafe to base deductions on the figures relating to a single year. In order, therefore, to furnish a valid basis for comparison, three five-yearly periods have been shown in table E giving the number of deaths and the rates per million persons.

A.—CAUSES OF DEATH : MALES, 1948.

INTERMEDIATE CLASSIFICATION.

(Figures in parentheses indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust.
1. Typhoid and Paratyphoid Fevers (1)	1, 2	1	3	2	..	..	1	..	..	7
2. Plague (2)	3	..	..	..	..	..	..	..	..	..
3. Scarlet Fever (3)	8	2	1	..	..	..	..	..	..	3
4. Whooping Cough (4)	9	11	8	1	5	..	4	..	..	29
5. Diphtheria (5)	10	24	5	3	1	7	1	..	..	41
6. Tuberculosis of the Respiratory System (6)	13	539	367	180	98	120	47	3	3	1,357
7a. Tubercular Meningitis (7a)	14 (4)	9	7	1	3	3	1	..	..	24
7b. Other forms of Tuberculosis (7b)	14 (b)-22	19	20	8	6	3	3	..	..	68
Total, Tuberculosis .. .. .	..	567	403	189	107	126	51	3	3	1,449
8. Septicæmia, Purulent Infection (Non-puerperal) (14)	24	14	6	..	4	..	2	..	..	26
9. Dysentery (14)	27	3	3	1	..	..	..	..	..	7
10. Malaria (8)	28	3	1	3	..	..	..	..	..	7
11. Syphilis (9)	30	112	90	39	19	19	9	..	1	289
12a. Influenza—Pneumonic (10a)	33 (a)	52	13	32	4	7	1	..	2	111
12b. Influenza—Other (10b)	33 (b)	37	15	13	5	2	1	..	..	73
13. Small-pox (11)	34	..	..	..	..	..	..	..	..	..
14. Measles (12)	35	21	2	3	4	..	2	..	1	33
15. Typhus Fever (13)	39	..	..	3	..	2	..	..	..	5
16. Diseases caused by Helminths (14)	40-42	12	8	..	2	..	2	..	..	24
17. Other Infectious and Parasitic Diseases (14)	*	85	44	38	25	29	11	..	..	232
18. Cancer of the Buccal Cavity and Pharynx (15)	45	81	69	27	27	27	8	..	..	239
19. Cancer of the Digestive Organs and Peritoneum (15)	46	1,012	754	370	239	188	84	..	2	2,649
20. Cancer of the Respiratory System (15)	47	205	134	76	59	45	15	..	..	534
22. Cancer of the Breast (15)	50	2	4	1	..	..	..	..	..	7
23. Cancer of Other or Unspecified Organs (15)	49, 51-55	582	420	104	135	94	43	1	..	1,460
Total, Cancer .. .. .	..	1,882	1,381	668	460	364	150	1	2	4,898
24. Non-malignant Tumours or Tumours of Unspecified Nature (16)	56, 57	104	27	32	17	9	..	..	..	189
25. Acute Rheumatic Fever (20)	58	26	3	15	5	4	1	..	..	54
26. Chronic Rheumatism and Gout (17)	59, 60	14	23	5	8	2	3	..	..	55
27. Diabetes Mellitus (18)	61	188	146	69	50	28	13	..	..	494
28. Diseases of the Thyroid and Parathyroid Glands (20)	63	7	6	2	..	1	2	..	..	18
29. Other General Diseases (20)	62, 64-66	26	14	9	2	2	2	..	..	62
30. Avitaminoses (20)	67-71	1	1	3	1	..	..	..	..	6
31. Anæmias (20)	73	41	20	19	3	7	6	..	..	96
32. Leucæmias, Pseudoleucæmias, and other Diseases of the Blood and Blood-making Organs (20)	72, 74-76	95	60	37	28	11	7	..	..	238
33. Alcoholism (acute or chronic) (19)	77	55	12	37	8	2	2	1	..	117
34. Other Chronic Poisonings (20)	78, 79	3	..	4	..	..	..	..	..	7
35. Meningitis (Non-meningococcal) (21)	81	31	14	12	6	5	3	..	..	71
36. Diseases of the Spinal Cord (21)	82	30	19	22	5	5	1	..	..	82
37. Intra-cranial Lesions of Vascular Origin (22)	83	1,501	981	465	361	182	110	1	5	3,606
38. Mental Diseases and Deficiency (23)	84	10	8	6	11	2	2	..	..	39
39. Epilepsy (23)	85	46	18	5	11	1	4	..	..	85
40. Other Diseases of the Nervous System (23)	80, 86, 87	108	62	39	25	16	6	1	..	257
41. Diseases of the Eye, Ear and their Annexa (23)	88, 89	10	12	4	6	6	1	..	1	40
42. Pericarditis (24)	90	7	9	4	2	1	..	1	..	24
43. Chronic Affections of the Valves and Endocardium (24)	92	235	163	108	71	48	28	1	1	658
44. Diseases of the Myocardium (24)	93	3,095	1,972	976	584	499	208	1	2	7,337
45. Diseases of the Coronary Arteries and Angina Pectoris (24)	94	2,180	1,595	726	483	334	163	5	11	5,407
46. Other Diseases of the Heart (24)	91, 95	341	182	50	53	22	31	2	2	686
Total, Heart Diseases .. .. .	..	5,861	3,921	1,864	1,193	904	430	10	16	14,199

* No. 17—4-7, 11, 12, 23, 25, 26, 29, 31, 32, 36-38, 43, 44.

A.—CAUSES OF DEATH: MALES, 1948—*continued*.

INTERMEDIATE CLASSIFICATION.

(Figures in parentheses indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust.
47. Arteriosclerosis and Gangrene (25)	97, 98	274	210	75	63	92	45	..	1	760
48. Other Diseases of the Circulatory System (25)	96, 99-103	108	74	47	15	17	11	..	1	273
49a. Acute Bronchitis (26a)	106 (a) (c)	37	9	18	6	2	5	..	..	77
49b. Chronic Bronchitis (26b)	106 (b) (d)	120	65	67	24	25	7	1	..	309
50. Pneumonia and Broncho-pneumonia (27)	107-109	830	621	335	154	175	92	5	3	2,215
51. Pleurisy (28)	110	15	13	13	6	4	1	..	..	52
52. Other Diseases of the Respiratory System (except Tuberculosis) (28)	104, 105, 111-114	201	164	112	64	34	24	4	2	605
53. Ulcer of the Stomach and Duodenum (32b)	117	204	125	49	40	23	16	..	2	459
54. Diarrhoea and Enteritis (under 2 years of age) (29a)	119	78	34	38	35	8	4	..	..	197
55. Diarrhoea and Enteritis (2 years and over) (29b)	120	35	24	5	8	5	3	..	1	81
56. Appendicitis (30)	121	55	47	24	10	6	6	..	..	148
57. Hernia, Intestinal Obstruction (32a)	122	134	97	47	27	11	12	..	..	328
58. Cirrhosis of the Liver (31a)	124	95	80	30	17	19	9	2	1	253
59. Other Diseases of the Liver and Biliary Passages, including Biliary Calculi (31b)	125-127	61	57	27	15	13	5	..	..	178
60. Other Diseases of the Digestive System (32b)	*	74	61	25	24	13	3	..	..	200
61. Nephritis (33)	130-132	665	605	312	108	97	64	..	1	1,852
62. Other Diseases of the Kidneys and Ureters (34)	133	42	35	28	14	5	4	..	..	128
63. Calculi of the Urinary Passages (34)	134	20	24	11	6	5	2	..	1	69
64. Diseases of the Urinary Bladder (34)	135	7	12	2	3	1	1	..	..	26
65. Diseases of the Urethra, Urinary Abscess, etc. (34)	136	6	4	1	2	..	2	..	..	15
66. Diseases of the Prostate (34)	137	161	184	82	37	36	28	..	..	528
67. Diseases of the Genital Organs, not specified as Venereal (34)	138, 139	1	..	1	1	..	..	..	..	3
73. Diseases of the Skin and Cellular Tissue (37)	151-153	13	7	4	4	4	1	..	..	33
74. Diseases of the Bones and Organs of Locomotion (except Tuberculosis and Rheumatism) (37)	154-156	13	6	4	..	4	1	..	..	28
75. Congenital Malformations (Stillbirths not included) (38)	157	189	100	62	37	44	14	..	2	448
76. Congenital Debility (38)	158	33	11	11	4	1	..	..	..	60
77. Premature Birth (38)	159	376	202	165	73	72	52	..	6	946
78. Injury at Birth (38)	160	162	90	57	24	22	11	1	3	370
79. Other Diseases Peculiar to the First Year of Life (38)	161	123	70	42	23	20	5	..	..	283
80. Senility (39)	162	506	252	209	102	39	20	3	3	1,134
81. Suicide (40)	163, 164	246	127	93	37	48	19	3	5	578
82. Homicide (41)	165-168	29	12	2	4	3	1	..	1	52
83. Automobile Accidents (42)	170	417	321	125	105	95	27	3	4	1,097
84. Other Violent or Accidental Deaths (43)	169, 171-195	715	410	339	130	119	75	11	2	1,801
Total, Accidents	..	1,132	731	464	235	214	102	14	6	2,898
85. Deaths due to Operations of War (43)	196, 197	..	..	..	..	..	..	..	..	..
86. Legal Executions (43)	198	..	..	..	..	..	..	..	..	..
87. Ill-defined or Unspecified (44)	199, 200	57	20	21	14	2	..	6	..	120
Total Males	..	17,085	11,503	6,127	3,619	2,797	1,398	56	70	42,655

* No. 60:—115, 116, 118, 123, 128, 129.

B.—CAUSES OF DEATH : FEMALES, 1948.

INTERMEDIATE CLASSIFICATION.

(Figures in parentheses indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust.
1. Typhoid and Paratyphoid Fevers (1)	1, 2	1	2	..	..	1	..	..	..	4
2. Plague (2)	3	..	..	..	..	..	..	..	..	..
3. Scarlet Fever (3)	8	2	..	..	1	..	..	..	..	3
4. Whooping Cough (4)	9	16	12	4	3	..	1	..	..	36
5. Diphtheria (5)	10	27	5	2	4	..	..	1	..	39
6. Tuberculosis of the Respiratory System (6)	13	232	214	68	71	37	27	1	1	651
7a. Tubercular Meningitis (7a)	14 (a)	6	4	..	1	2	2	..	..	15
7b. Other Forms of Tuberculosis (7b)	14(b)—22	10	20	9	8	1	6	..	..	51
<i>Total, Tuberculosis</i> .. .. .	..	248	238	77	80	40	35	1	1	720
8. Septicæmia, Purulent Infection (Non-puerperal) (14)	24	4	1	1	3	1	1	..	..	11
9. Dysentery (14)	27	1	3	3	3	1	..	..	..	11
10. Malaria (8)	28	1	..	1	..	..	..	..	..	2
11. Syphilis (9)	30	30	30	11	10	10	3	..	..	94
12a. Influenza—Pneumonic (8a)	33 (a)	49	20	34	2	9	4	1	..	119
12b. Influenza—Other (8b)	33 (b)	37	17	16	..	5	1	..	..	76
13. Small-pox (11)	34	..	..	..	..	..	..	..	..	..
14. Measles (12)	35	28	7	1	4	1	5	..	1	47
15. Typhus Fever (13)	39	1	..	..	..	2	..	..	..	3
16. Diseases caused by Helminths (14)	40-42	3	6	4	4	2	1	..	..	20
17. Other Infectious and Parasitic Diseases (14)	*	46	39	22	24	15	5	1	..	152
18. Cancer of the Buccal Cavity and Pharynx (15)	45	19	18	6	3	2	1	..	..	49
19. Cancer of the Digestive Organs and Peritoneum (15)	46	796	632	251	197	114	67	..	2	2,059
20. Cancer of the Respiratory System (15)	47	62	51	21	7	10	4	..	1	156
21. Cancer of the Uterus (15)	48	216	174	69	74	31	21	..	..	585
22. Cancer of the Breast (15)	50	372	324	121	108	50	27	..	2	1,004
23. Cancer of Other or Unspecified Organs (15)	49, 51-55	327	315	103	92	59	23	..	1	920
<i>Total, Cancer</i> .. .. .	..	1,792	1,514	571	481	266	143	..	6	4,773
24. Non-malignant Tumours or Tumours of Unspecified Nature (16)	56, 57	92	36	36	28	13	3	..	1	269
25. Acute Rheumatic Fever (20)	58	23	2	11	4	7	1	..	..	48
26. Chronic Rheumatism and Gout (17)	59, 60	39	47	9	15	6	1	1	..	118
27. Diabetes Mellitus (18)	61	339	307	144	91	40	31	..	..	952
28. Diseases of the Thyroid and Parathyroid Glands (20)	63	46	26	16	6	6	9	..	..	109
29. Other General Diseases (20)	62, 64-66	23	10	10	10	5	4	..	..	62
30. Avitaminoses (20)	67-71	3	1	..	1	..	..	..	..	5
31. Anæmias (20)	73	57	23	22	12	4	5	..	1	124
32. Leucæmias, Pseudoleucæmias, and other Diseases of the Blood and Blood-making Organs (20)	72, 74-76	79	57	19	18	8	6	1	1	180
33. Alcoholism (acute or chronic) (19)	77	20	4	7	2	2	..	..	..	35
34. Other Chronic Poisonings (20)	78, 79	1	..	2	..	..	..	..	..	3
35. Meningitis (Non-meningococcal) (21)	81	15	11	17	8	2	1	..	..	54
36. Diseases of the Spinal Cord (21)	82	22	19	10	13	6	2	..	..	72
37. Intra-cranial Lesions of Vascular Origin (22)	83	1,845	1,462	550	464	241	130	1	11	4,704
38. Mental Diseases and Deficiency (23)	84	25	5	7	..	2	2	..	..	41
39. Epilepsy (23)	85	34	17	8	4	5	5	..	..	73
40. Other Diseases of the Nervous System (23)	80, 86, 87	96	63	31	21	10	7	..	..	228
41. Diseases of the Eye, Ear and their Annexa (23)	88, 89	5	6	1	5	2	..	..	..	10
42. Pericarditis (24)	90	5	8	..	..	1	1	..	..	15
43. Chronic Affections of the Valves and Endocardium (24)	92	195	182	62	72	30	32	..	4	577
44. Diseases of the Myocardium (24)	93	2,615	1,994	696	509	344	185	..	4	6,347
45. Diseases of the Coronary Arteries and Angina Pectoris (24)	94	1,091	813	305	236	127	83	..	1	2,656
46. Other Diseases of the Heart (24)	91, 95	183	178	37	30	17	22	1	..	168
<i>Total, Heart Diseases</i> .. .. .	..	4,089	3,175	1,100	847	519	323	1	9	10,063
47. Arteriosclerosis and Gangrene (25)	97, 98	256	280	58	73	67	33	..	..	707
48. Other Diseases of the Circulatory System (25)	96, 99-103	101	70	42	19	20	8	..	..	260

* No. 17: 1-4-7, 11, 12, 23, 25, 26, 29, 31, 32, 36-38, 43, 44.

B.—CAUSES OF DEATH: FEMALES, 1948—*continued*.

INTERMEDIATE CLASSIFICATION.

(Figures in parentheses indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust.
49a. Acute Bronchitis (26a) ..	106 (a) (c)	33	17	12	6	2	5	..	1	76
49b. Chronic Bronchitis (26b) ..	106 (b) (d)	58	44	33	21	5	10	..	..	171
50. Pneumonia and Broncho-pneumonia (27) ..	107-109	672	621	210	107	115	87	1	2	1,815
51. Pleurisy (28) ..	110	11	6	7	2	..	2	1	..	29
52. Other Diseases of the Respiratory System (except Tuberculosis) (28) ..	104, 105, 111-114	153	113	70	53	28	21	..	1	439
53. Ulcer of the Stomach and Duodenum (32b) ..	117	56	32	16	5	9	2	..	..	120
54. Diarrhoea and Enteritis (under 2 years of age) (29a) ..	119	44	25	29	33	5	2	..	..	138
55. Diarrhoea and Enteritis (2 years and over) (29b) ..	120	40	28	9	5	5	3	..	..	90
56. Appendicitis (30) ..	121	22	27	22	8	4	5	..	..	88
57. Hernia, Intestinal Obstruction (32a) ..	122	122	63	38	24	20	7	..	..	274
58. Cirrhosis of the Liver (31a) ..	124	46	59	9	11	12	5	..	..	142
59. Other Diseases of the Liver and Biliary Passages, including Biliary Calculi (31b) ..	125-127	106	72	39	32	14	10	..	..	273
60. Other Diseases of the Digestive System (32b) ..	*	75	57	27	22	13	9	..	..	203
61. Nephritis (33) ..	130-132	534	538	238	84	73	34	1	1	1,503
62. Other Diseases of the Kidneys and Ureters (34) ..	133	47	30	22	8	9	2	..	..	118
63. Calculi of the Urinary Passages (34) ..	134	10	6	6	1	1	2	..	..	26
64. Diseases of the Urinary Bladder (34) ..	135	5	3	1	1	2	2	..	..	14
65. Diseases of the Urethra, Urinary Abscess, &c. (34) ..	136	..	..	2	2	1	..	..	..	5
67. Diseases of the Genital Organs not specified as Venereal or connected with Pregnancy, &c. (34) ..	138, 139	21	21	15	11	1	2	..	..	71
68. Diseases and Accidents of Pregnancy (36) ..	142-145	23	14	9	5	3	4	..	..	58
69. Abortion, without mention of Infection (36) ..	141	8	6	5	1	..	1	1	..	22
70. Abortion, with mention of Infection (35a) ..	140	8	7	3	2	1	2	..	..	23
71. Infection during Child-birth and the Puerperium (35b) ..	147	14	9	6	3	6	..	..	..	38
72. Other Accidents and Diseases of Child-birth and the Puerperium (36) ..	146, 148-150	39	27	18	11	10	4	..	..	109
73. Diseases of the Skin and Cellular Tissue (37) ..	151-153	14	8	3	2	..	4	1	..	32
74. Diseases of the Bones and Organs of Locomotion (except Tuberculosis and Rheumatism) (37) ..	154-156	19	7	2	..	1	..	..	..	29
75. Congenital Malformations (Stillbirths not included) (38) ..	157	150	82	47	36	35	12	..	1	363
76. Congenital Debility (38) ..	158	..	6	7	1	1	..	..	..	36
77. Premature Birth (38) ..	159	256	150	129	66	55	30	1	2	689
78. Injury at Birth (38) ..	160	99	61	28	31	9	7	1	2	238
79. Other Diseases peculiar to the First Year of Life (38) ..	161	71	47	31	20	16	6	..	..	191
80. Senility (39) ..	162	521	333	155	142	38	26	..	..	1,215
81. Suicide (40) ..	163, 164	74	40	24	6	10	4	..	1	159
82. Homicide (41) ..	165-168	21	7	2	3	2	..	1	..	36
83. Automobile Accidents (42) ..	170	72	71	45	13	21	9	..	..	231
84. Other Violent or Accidental Deaths (43) ..	169, 171-195	328	159	153	85	43	40	..	2	810
Total, Accidents ..	..	400	230	198	98	64	49	..	2	1,041
85. Deaths due to Operations of War (43) ..	196, 197	..	..	..	..	..	..	..	..	..
86. Legal Executions (43) ..	198	..	..	..	..	..	..	..	..	..
87. Ill-defined or Unspecified (44) ..	199, 200	29	11	16	6	..	1	1	1	65
Total Females ..	..	13,318	10,322	4,335	3,129	1,888	1,130	17	45	34,184

* No. 60:—115, 116, 118, 123, 128, 129.

C.—CAUSES OF DEATH : PERSONS, 1948.

INTERMEDIATE CLASSIFICATION.

(Figures in parentheses indicate the abridged classification number in each instance.)

Intermediate Classification.	to Inter- mediate Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust.
1. Typhoid and Paratyphoid Fevers (1)	1, 2	2	5	2	..	1	1	..	..	11
2. Plague (2)	3	..	..	..	..	..	..	..	..	6
3. Scarlet Fever (3)	8	4	1	..	1	..	..	..	..	65
4. Whooping Cough (4)	9	27	20	5	8	..	5	..	..	80
5. Diphtheria (5)	10	51	10	5	5	7	1	1	..	2,008
6. Tuberculosis of the Respiratory System (6)	13	771	581	248	169	157	74	4	4	39
7a. Tubercular Meningitis (7a)	14 (a)	15	11	1	4	5	3	..	..	122
7b. Other Forms of Tuberculosis (7b)	14(b)-22	20	49	17	14	4	9	..	..	2,169
Total, Tuberculosis .. .. .	..	815	641	266	187	166	86	4	4	37
8. Septicæmia, Purulent Infection (Non-puerperal) (14)	24	18	7	1	7	1	3	..	..	18
9. Dysentery (14)	27	4	6	4	3	1	..	..	..	9
10. Malaria (8)	28	4	1	4	..	..	..	..	..	383
11. Syphilis (9)	30	142	120	50	29	29	12	..	1	230
12a. Influenza (Pneumonic) (8a)	33 (a)	101	33	66	6	16	5	1	2	149
12b. Influenza (Other) (8b)	33 (b)	74	32	29	5	7	2	..	..	80
13. Small-pox (11)	34	..	..	..	..	..	..	..	..	8
14. Measles (12)	35	49	9	4	8	1	7	..	2	..
15. Typhus Fever (13)	39	1	..	3	..	4	..	..	..	44
16. Diseases caused by Helminths (14)	40-42	15	14	4	6	2	3	..	..	384
17. Other Infectious and Parasitic Diseases (14)	*	131	83	60	49	44	16	1	..	288
18. Cancer of the Buccal Cavity and Pharynx (15)	45	100	87	33	30	29	9	..	..	4,708
19. Cancer of the Digestive Organs and Peritoneum (15)	46	1,808	1,386	621	436	302	151	..	4	690
20. Cancer of the Respiratory System (15)	47	267	185	97	66	55	19	..	1	585
21. Cancer of the Uterus (15)	48	216	174	69	74	31	21	..	..	1,011
22. Cancer of the Breast (15)	50	374	328	122	108	50	27	..	2	2,389
23. Cancer of other or unspecified Organs (15)	49, 51-55	909	735	297	227	153	66	1	1	9,671
Total, Cancer .. .. .	..	3,674	2,895	1,239	941	620	293	1	8	398
24. Non-malignant Tumours or Tumours of Unspecified Nature (16)	56, 57	196	63	68	45	22	3	..	1	102
25. Acute Rheumatic Fever (20)	58	49	5	20	9	11	2	..	..	173
26. Chronic Rheumatism and Gout (17)	59, 60	53	70	14	23	8	4	1	..	1,446
27. Diabetes Mellitus (18)	61	527	453	213	141	68	44	..	..	127
28. Diseases of the Thyroid and Parathyroid Glands (20)	63	53	32	18	6	7	11	..	..	124
29. Other General Diseases (20)	62, 64-66	49	24	19	19	7	6	..	..	11
30. Avitaminoses (20)	67-71	4	2	3	2	..	..	..	..	220
31. Anæmias (20)	73	98	43	41	15	11	11	..	1	427
32. Leucæmias, Pseudoleucæmias, and other Diseases of the Blood and Blood-making Organs (20)	72, 74-76	174	117	56	46	19	13	1	1	152
33. Alcoholism (acute or chronic) (19)	77	75	16	44	10	4	2	1	..	10
34. Other Chronic Poisonings (20)	78, 79	4	..	6	..	..	..	..	..	125
35. Meningitis (Non-meningococcal) (21)	81	46	25	29	14	7	4	..	..	154
36. Diseases of the Spinal Cord (21)	82	52	38	32	18	11	3	..	..	8,310
37. Intra-cranial Lesions of Vascular Origin (22)	83	3,346	2,443	1,015	825	423	240	2	16	80
38. Mental Diseases and Deficiency (23)	84	35	13	13	11	4	4	..	..	158
39. Epilepsy (23)	85	80	35	13	15	6	9	..	..	485
40. Other Diseases of the Nervous System (23)	80, 86, 87	204	125	70	46	26	13	1	..	59
41. Diseases of the Eye, Ear and their Annexa (23)	88, 89	15	18	5	11	8	1	..	1	39
42. Pericarditis (24)	90	12	17	4	2	2	1	1	..	1,232
43. Chronic Affections of the Valves and Endocardium (24)	92	430	345	170	143	78	60	1	5	13,684
44. Diseases of the Myocardium (24)	93	5,710	3,966	1,672	1,093	843	393	1	6	8,153
45. Diseases of the Coronary Arteries and Angina Pectoris (24)	94	3,271	2,408	1,031	719	461	246	5	12	1,154
46. Other Diseases of the Heart (24)	91, 95	527	360	87	81	39	53	3	2	24,262
Total, Heart Diseases .. .. .	..	9,950	7,096	2,964	2,040	1,423	763	11	25	1,527
47. Arteriosclerosis and Gangrene (25)	97, 98	530	490	133	136	159	78	..	1	533
48. Other Diseases of the Circulatory System (25)	96, 99-103	209	144	89	34	37	19	..	1	153
49a. Acute Bronchitis (26a)	106 (a)(c)	70	26	30	12	4	10	..	1	..

* No. 17:—4-7, 11, 12, 23, 25, 26, 29, 31, 32, 36-38, 43, 44.

C.—CAUSES OF DEATH: PERSONS, 1948—continued.

INTERMEDIATE CLASSIFICATION.

(Figures in parentheses indicate the abridged classification number in each instance.)

Intermediate Classification.	General Classification Numbers.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N.T.	A. C. T.	Aust.
49b. Chronic Bronchitis (26b) ..	106 (b) (d)	178	109	100	45	30	17	1	..	480
50. Pneumonia and Broncho-pneumonia (27) ..	107-109	1,502	1,242	545	261	290	179	6	5	4,030
51. Pleurisy (28) ..	110	26	19	20	8	4	3	1	..	81
52. Other Diseases of the Respiratory System (except Tuberculosis) (28) ..	104, 105, 111-114	354	277	182	117	62	45	4	3	1,044
53. Ulcer of the Stomach and Duodenum (32b) ..	117	260	157	65	45	32	18	..	2	579
54. Diarrhoea and Enteritis (under 2 years of age) (20a) ..	119	122	59	67	68	13	6	..	..	335
55. Diarrhoea and Enteritis (2 years and over) (20b) ..	120	75	52	14	13	10	6	..	1	171
56. Appendicitis (30) ..	121	77	74	46	18	10	11	..	..	236
57. Hernia, Intestinal Obstruction (32a) ..	122	256	160	85	51	31	19	..	..	602
58. Cirrhosis of the Liver (31a) ..	124	141	139	39	28	31	14	2	1	395
59. Other Diseases of the Liver and Biliary Passages, including Biliary Calculi (31b) ..	125-127	167	129	66	47	27	15	..	..	451
60. Other Diseases of the Digestive System (32b) ..	*	149	118	52	46	26	12	..	..	403
61. Nephritis (33) ..	130-132	1,199	1,143	550	192	170	98	1	2	3,355
62. Other Diseases of the Kidneys and Ureters (34) ..	133	89	65	50	22	14	6	..	..	246
63. Calculi of the Urinary Passages (34) ..	134	30	30	17	7	6	4	..	1	95
64. Diseases of the Urinary Bladder (34) ..	135	12	15	3	4	3	3	..	..	40
65. Diseases of the Urethra, Urinary Abscess, etc. (34) ..	136	6	4	3	4	1	2	..	..	20
66. Diseases of the Prostate (34) ..	137	161	184	82	37	36	28	..	..	528
67. Diseases of the Genital Organs not specified as Venereal or connected with Pregnancy, etc. (34) ..	138, 139	22	21	16	12	1	2	..	..	74
68. Diseases and Accidents of Pregnancy (36) ..	142-145	23	14	9	5	3	4	..	..	58
69. Abortion, without mention of Infection (36) ..	141	8	6	5	1	..	1	1	..	22
70. Abortion, with mention of Infection (35a) ..	140	8	7	3	2	1	2	..	..	23
71. Infection during Child-birth and the Puerperium (35) ..	147	14	9	6	3	6	..	..	..	38
72. Other Accidents and Diseases of Child-birth and the Puerperium (36) ..	146, 148-150	39	27	18	11	10	4	..	..	109
73. Diseases of the Skin and Cellular Tissue (37) ..	151-153	27	15	7	6	4	5	1	..	65
74. Diseases of the Bones and Organs of Locomotion (except Tuberculosis and Rheumatism) (37) ..	154-156	32	13	6	..	5	1	..	..	57
75. Congenital Malformations (Stillbirths not included) (38) ..	157	339	182	109	73	79	26	..	3	811
76. Congenital Debility (38) ..	158	54	17	15	5	2	..	..	..	96
77. Premature Birth (38) ..	159	632	352	294	139	127	82	1	8	1,635
78. Injury at Birth (38) ..	160	261	151	85	55	31	18	2	5	668
79. Other Diseases peculiar to the First Year of Life (38) ..	161	194	117	73	43	36	11	..	..	474
80. Senility (39) ..	162	1,027	585	364	244	77	46	3	3	2,349
81. Suicide (40) ..	163, 164	320	167	117	43	58	23	3	6	737
82. Homicide (41) ..	165-168	50	19	4	7	5	1	1	1	88
83. Automobile Accidents (42) ..	170	489	392	170	118	116	36	3	4	1,328
84. Other Violent or Accidental Deaths (43) ..	169, 171-195	1,043	569	492	215	162	115	11	4	2,611
Total, Accidents ..	..	1,532	961	662	333	278	151	14	8	3,939
85. Deaths due to Operations of War (43) ..	196-197	..	..	..	..	..	..	..	..	..
86. Legal Executions (43) ..	198	..	..	..	..	..	..	..	..	..
87. Ill-defined or Unspecified (44) ..	199, 200	86	31	37	20	2	1	7	1	185
Total ..	..	30,403	21,825	10,462	6,748	4,685	2,528	73	115	76,839

* No. 60:—115, 116, 118, 123, 128, 129.

D.—CAUSES OF DEATH : PERSONS, AUSTRALIA.

ABBREIDED CLASSIFICATION.

Abridged Classification.	General Classification Numbers.	1944.	1945.	1946.	1947.	1948.	1948— Rate per 1,000,000 Mean Population.
1. Typhoid and Paratyphoid Fevers	I, 2	18	11	9	11	11	1
2. Plague	3	..	..	..	..	..	..
3. Scarlet Fever	8	27	..	7	9	6	1
4. Whooping Cough	9	61	84	74	75	65	8
5. Diphtheria	10	181	183	119	88	50	10
6. Tuberculosis of the Respiratory System	13	2,165	2,186	2,200	2,081	2,068	260
7a. Tubercular Meningitis	14 (a)	64	65	60	45	39	5
7b. Other Tuberculous Diseases	14b-22	158	162	133	135	122	16
8. Malaria	28	8	10	9	9	9	1
9. Syphilis	30	398	334	344	393	383	50
10a. Influenza—Pneumonic	33 (a)	72	93	120	77	230	30
10b. Influenza—Other	33 (b)	108	69	91	74	149	19
11. Smallpox	34	..	..	..	..	..	..
12. Measles	35	11	25	109	36	80	10
13. Typhus Fever	37	11	14	8	7	8	1
14. Other Infective and Parasitic Diseases	38	544	484	552	430	483	63
15. Cancer and other Malignant Tumours	45-55	8,571	8,937	9,118	9,464	9,471	1,254
16. Non-malignant Tumours or Tumours of Undetermined Nature	56, 57	461	421	457	429	308	52
17. Chronic Rheumatism and Gout	59, 60	143	162	182	159	173	23
18. Diabetes Mellitus	61	1,294	1,306	1,306	1,330	1,444	188
19. Chronic or Acute Alcoholism	77	75	65	109	116	152	20
20. Other General Diseases	*	1,047	1,035	1,030	1,005	1,021	132
21. Non-meningococcal Meningitis and Diseases of the Spinal Cord	81, 82	375	335	313	309	279	36
22. Intra-cranial Lesions of Vascular Origin	83	6,755	7,071	7,419	7,515	8,310	1,078
23. Other Diseases of the Nervous System and Sense Organs	80, 84-89	807	813	794	780	782	101
24. Diseases of the Heart	90-95	20,411	21,441	23,022	22,884	24,062	3,116
25. Other Diseases of the Circulatory System	96-103	1,958	1,907	2,095	2,004	2,002	267
26a. Acute Bronchitis	106 (a)(c)	150	147	142	137	153	20
26b. Chronic Bronchitis	106 (b)(d)	464	474	475	466	470	62
27. Pneumonia and Broncho-pneumonia	107-109	3,596	3,381	3,800	3,442	4,050	523
28. Other Diseases of the Respiratory System	*	966	951	985	1,064	1,125	146
29a. Diarrhoea and Enteritis (under two years of age)	119	292	234	214	285	335	43
29b. Diarrhoea and Enteritis (two years and over)	120	251	266	209	157	171	22
30. Appendicitis	121	380	315	338	303	236	31
31a. Cirrhosis of the Liver	124	256	233	288	340	395	51
31b. Other Diseases of the Liver and Biliary Calculi	125-127	433	462	440	451	481	50
32a. Hernia, Intestinal Obstruction	122	706	648	675	589	602	78
32b. Other Diseases of the Digestive System	*	959	865	891	927	982	127
33. Nephritis	130-132	3,495	3,450	3,593	3,301	3,355	435
34. Other Diseases of the Genito-urinary System	133-139	1,143	1,059	1,088	1,017	1,003	130
35a. Post-abortive Sepsis	140	81	52	41	56	23	3
35b. Puerperal Infection	147	68	50	56	41	38	5
36. Other Diseases of Pregnancy, Child-birth and the Puerperium	141-146, 148-150	288	244	230	244	189	25
37. Diseases of the Skin, Bones, etc.	151-156	229	154	153	138	122	16
38. Congenital Debility, Malformations, Premature Birth, etc.	157-161	3,564	3,587	3,881	3,905	3,624	470
39. Senility	162	2,493	2,546	2,558	2,208	2,340	305
40. Suicide	163, 164	540	567	732	746	737	96
41. Homicide	165-168	106	77	90	91	88	11
42. Automobile Accidents	170	751	754	1,206	1,269	1,328	172
43. Other Accidental or Violent Deaths	169, 171-198	2,438	2,296	2,608	2,645	2,611	339
44. Unstated or Ill-defined Causes	199, 200	224	195	228	181	185	24
Total .. ..	..	69,596	70,231	74,661	73,468	76,839	9,965

* No. 14 :—4-7, 11, 12, 23-27, 29, 31, 32, 36-38, 40-44 ; No. 20 :—58, 62-76, 78, 79 ; No. 28 :—104, 105, 110-114
No. 32b :—115-118, 123, 128, 129.

NOTE.—All causes of death have been classified in accordance with the 1938 revision of the International List.

E.—CAUSES OF DEATH : PERSONS, AUSTRALIA, NUMBER AND RATES.

ABRIDGED CLASSIFICATION.

Abridged Classification.	General Classification Numbers.	Number of Deaths.			Average Rate per 1,000,000 of Mean Population.		
		1931-35.	1936-40.	1941-45.	1931-35.	1936-40.	1941-45.
1. Typhoid and Paratyphoid Fevers	1, 2	379	231	116	12	7	3
2. Plague	3	..	..	..	..	..	..
3. Scarlet Fever	8	331	180	137	10	5	4
4. Whooping Cough	9	1,186	927	766	36	27	21
5. Diphtheria	10	2,083	1,605	1,186	63	47	33
6. Tuberculosis of the Respiratory System ..	13	13,221	12,194	11,677	400	354	323
7a. Tubercular Meningitis	14 (a)	618	453	351	19	13	10
7b. Other Tuberculous Diseases	14 (b)-22	1,016	883	864	31	26	24
8. Malaria	28	97	58	58	3	2	2
9. Syphilis	30	1,600	1,828	2,006	48	53	55
10a. Influenza—Pneumonic	33 (a)	2,850	1,913	967	86	55	27
10b. Influenza—Other	33 (b)	1,326	819	717	40	24	20
11. Smallpox	34	1	1	1	..	..	..
12. Measles	35	391	390	407	12	11	11
13. Typhus Fever	35	15	30	50	1	1	1
14. Other Infective and Parasitic Diseases ..	39	2,649	2,577	3,387	80	75	94
15. Cancer and other Malignant Tumours ..	45-55	34,825	39,477	43,347	1,053	1,145	1,198
16. Non-malignant Tumours or Tumours of Undetermined Nature	56, 57	1,817	2,188	2,152	55	63	59
17. Chronic Rheumatism and Gout	59, 60	847	835	814	26	24	23
18. Diabetes Mellitus	61	5,095	5,953	6,934	154	173	192
19. Chronic or Acute Alcoholism	77	235	331	390	7	10	11
20. Other General Diseases	*	5,437	5,792	5,313	164	168	147
21. Non-meningococcal Meningitis and Diseases of the Spinal Cord	81, 82	1,371	1,773	1,958	42	51	54
22. Intra-cranial Lesions of Vascular Origin ..	83	22,395	26,138	33,574	676	758	928
23. Other Diseases of the Nervous System and Sense Organs	80, 84-89	4,600	4,127	4,195	139	120	116
24. Diseases of the Heart	90-95	60,227	78,670	103,176	1,817	2,282	2,852
25. Other Diseases of the Circulatory System ..	96-103	7,330	10,182	9,643	223	295	267
26a. Acute Bronchitis	106 (a) (c)	1,078	921	892	33	27	25
26b. Chronic Bronchitis	106 (b) (d)	2,966	2,662	2,589	90	77	71
27. Pneumonia and Broncho-pneumonia	107-109	20,157	21,125	19,868	608	613	549
28. Other Diseases of the Respiratory System ..	*	5,045	5,021	5,004	152	146	138
29a. Diarrhoea and Enteritis (under two years of age)	119	2,043	1,855	1,752	62	54	48
29b. Diarrhoea and Enteritis (two years and over)	120	1,922	1,598	1,537	58	46	42
30. Appendicitis	121	2,680	2,641	1,974	81	77	55
31a. Cirrhosis of the Liver	124	1,321	1,501	1,415	40	44	39
31b. Other Diseases of the Liver and Biliary Calculi	125-127	2,326	2,388	2,275	70	69	63
32a. Hernia, Intestinal Obstruction	122	2,792	2,911	3,241	84	84	90
32b. Other Diseases of the Digestive System ..	*	4,404	4,896	4,955	133	142	137
33. Nephritis	130-132	17,754	19,206	18,634	536	557	515
34. Other Diseases of the Genito-urinary System ..	133-139	5,388	6,056	6,055	163	176	167
35a. Post-abortive Sepsis	140	761	763	452	23	22	12
35b. Puerperal Infection	147	466	393	393	14	11	11
36. Other Diseases of Pregnancy, Child-birth and the Puerperium	141-146, 148-150	1,833	1,671	1,416	56	48	39
37. Diseases of the Skin, Bones, etc.	151-156	1,696	1,669	1,144	51	48	32
38. Congenital Debility, Malformation, Premature Birth, etc.	157-161	15,909	16,498	18,290	481	478	505
39. Senility	162	14,021	13,757	13,312	424	399	368
40. Suicide	163, 164	3,988	3,780	2,841	121	110	79
41. Homicide	165-168	530	459	413	16	13	11
42. Automobile Accidents	170	4,372	6,862	4,384	132	199	121
43. Other Accidental or Violent Deaths	169	11,267	12,998	12,475	340	377	345
44. Unstated or Ill-defined Causes	171-198 199, 200	1,542	1,224	1,184	46	35	33
Total .. ..	..	298,262	332,410	360,680	9,011	9,641	9,970

* No. 14 :—4-7, 11, 12, 23-27, 29, 31, 32, 36-38, 40-44 ; No. 20 :—58, 62-76, 78, 79 ; No. 28 :—104, 105, 110-114
No. 32b :—115-118, 123, 128, 129.

NOTE.—All causes of death have been classified in accordance with the 1938 revision of the International List.

16. Deaths from Principal Specific Causes.—(i) *General*. In the preceding tables particulars have been given for each of the causes of death comprising the Intermediate and the Abridged Classifications. The more important of these causes are treated in detail hereunder. The Intermediate Classification number is indicated in parentheses for each cause or group of causes.

(ii) *All Forms of Tuberculosis* (6, 7). (a) *General*. The total number of deaths in 1948 was 2,169, consisting of 1,449 males and 720 females.

(b) *Age at Death*. The following table shows the age-groups of males, females and persons who died from this disease in 1948, together with comparable figures for 1921, 1931 and 1941.

TUBERCULOSIS (ALL FORMS) : DEATHS IN AGE-GROUPS, AUSTRALIA.

Age-group (Years).	1921.			1931.			1941.			1948.		
	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.
Under 5 ..	90	76	166	57	47	104	42	28	70	20	14	34
5-9 ..	30	28	58	14	14	28	12	10	22	4	12	16
10-14 ..	23	24	47	19	20	39	9	16	25	4	6	10
15-19 ..	72	100	172	45	105	150	30	52	82	10	18	28
20-24 ..	173	194	367	113	183	296	69	91	160	26	60	86
25-29 ..	232	246	478	136	199	335	63	132	195	53	81	134
30-34 ..	237	195	432	191	164	355	125	129	254	58	100	158
35-39 ..	247	178	425	187	156	343	144	111	255	77	70	147
40-44 ..	234	141	375	207	102	309	159	79	238	120	52	172
45-49 ..	223	102	325	197	83	280	180	76	256	151	64	215
50-54 ..	179	69	248	185	62	247	216	64	280	149	54	203
55-59 ..	172	65	237	164	57	221	210	52	262	198	40	238
60-64 ..	118	42	160	128	50	178	187	59	246	205	39	244
65-69 ..	79	32	111	110	38	148	137	39	176	163	38	201
70-74 ..	35	10	45	52	31	83	74	41	115	121	39	160
75-79 ..	18	7	25	27	16	43	48	18	66	58	23	81
80 and over ..	6	7	13	4	4	8	20	12	32	31	9	40
Unspecified ..	3	..	3	..	..	..	..	..	..	1	1	2
Total ..	2,171	1,516	3,687	1,836	1,331	3,167	1,725	1,009	2,734	1,449	720	2,169

(c) *Occupation at Death, Males*. A summary of the main groups of occupations of males who died from tuberculosis during 1948 is given in *Demography Bulletin* No. 66.

(d) *Length of Residence in Australia*. The length of residence in Australia of persons who died from tuberculosis in 1948 is given in the next table. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED FROM TUBERCULOSIS (ALL FORMS), 1948.

Length of Residence in Australia.	Male.	Fem.	Total.	Length of Residence in Australia.	Male.	Fem.	Total.
Born in Australia ..	1,140	641	1,781	Resident 10-14 years ..	4	5	9
Resident under 1 year ..	3	..	3	" 15-19 ..	5	1	6
" 1 year ..	1	..	1	" 20 years & over ..	234	66	300
" 2 years ..	..	1	1	Length of residence not stated ..	56	5	61
" 3 ..	1	..	1				
" 4 ..	..	..	..	
" 5-9 years ..	5	1	6	Total Deaths ..	1,449	720	2,169

(e) *Death-rates.* In order to show the relative incidence of tuberculosis in each State and Territory and the improvement which has taken place in recent years the death-rates from tubercular diseases for 1931, 1941 and 1948 are given in the following table. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

TUBERCULOSIS (ALL FORMS) : DEATH-RATES.(a)

State or Territory.	1931.			1941.			1948.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	53	37	45	47	24	36	37	16	27
Victoria ..	59	51	55	54	37	45	39	23	31
Queensland ..	45	28	37	40	20	30	33	14	24
South Australia ..	58	56	57	40	34	37	33	24	29
Western Australia	74	40	58	60	25	44	48	16	32
Tasmania ..	61	51	56	48	44	46	38	27	33
Northern Territory	69	..	44	27	35	29	38	24	33
Australian Capital Territory ..	21	25	23	..	15	7	30	12	22
Australia ..	55	42	49	48	29	38	38	19	28

(a) Number of deaths from tuberculosis per 100,000 of mean population.

(f) *Proportion of Total Deaths.* The following table shows the number of deaths from tuberculosis per 10,000 deaths from all causes in each State and Territory during 1911-20, 1921-30, 1931-40 and 1948. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

TUBERCULOSIS (ALL FORMS) : PROPORTION PER 10,000 TOTAL DEATHS.

State or Territory.	1911-20.			1921-30.			1931-40.			1948.		
	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.
N.S. Wales ..	670	625	651	599	536	572	476	378	434	332	186	268
Victoria ..	718	754	735	695	663	680	485	448	468	350	231	351
Queensland ..	559	480	529	516	406	472	413	323	377	308	178	254
South Australia	757	889	816	713	758	733	498	482	491	296	256	277
Western Aus-tralia ..	895	728	835	869	643	786	598	401	523	450	212	354
Tasmania ..	646	757	697	640	749	691	537	548	542	365	310	340
Northern Terri-tory ..	1,441	745	1,357	1,170	685	1,115	272	541	314	536	588	548
Australian Capital Territory	323	417	364	116	349	194	217	419	293	429	222	348
Australia ..	691	684	688	644	594	622	482	410	450	340	211	282

(g) *Death-rates, Various Countries.* The following table shows the death-rates from tuberculosis for Australia and each State in comparison with the rates for various other countries. Figures are for the latest available year in each case. The table indicates that Australia occupies a very favourable position as regards the death-rate from this disease.

TUBERCULOSIS : DEATH-RATES (a), VARIOUS COUNTRIES.

Country.	Year.	Respiratory System.	All Forms.	Country.	Year.	Respiratory System.	All Forms.
Denmark.. ..	1948	21	25	Northern Ireland	1947	57	72
Australia (b) ..	1948	23	23	Scotland	1948	66	76
Queensland (b) ..	1948	22	24	Ceylon	1948	54	58
New South Wales(b)	1948	25	27	Germany.. ..	1942	(e)	62
South Australia (b)	1948	26	28	Belgium	1947	(e)	64
Victoria (b) ..	1948	28	31	Egypt	1947	(e)	65
Western Australia(b)	1948	30	32	Norway	1944	63	74
Tasmania (b) ..	1948	28	33	France	1947	(e)	79
Union of South				Italy	1946	64	84
Africa (c) ..	1944	26	32	Hungary	1947	(e)	106
U.S. of America ..	1947	31	34	Spain	1946	68	119
Canada	1948	31	37	Eire	1947	95	124
New Zealand (d) ..	1944	31	38	Greece	1936	104	128
Sweden	1946	36	45	Czechoslovakia ..	1936	114	129
Netherlands ..	1946	32	46	Japan	1936	105	142
Switzerland ..	1948	41	52	Portugal	1948	125	148
Great Britain and				Poland (f) ..	1937	135	153
Northern Ireland	1947	50	58	Finland	1946	153	178
England and							
Wales	1947	47	55				

(a) Number of deaths per 100,000 of mean population. (b) Excludes full-blood aboriginals.
 (c) European population only. (d) Excludes Maoris. (e) Not available. (f) In towns with over 100,000 inhabitants.

(iii) *Cancer and other Malignant Tumours (18 to 23).* (a) *General.* The number of deaths from cancer increased continuously to 6,256 in 1929, declined slightly to 6,120 in 1930, but rose again progressively to 9,671 in 1948.

(b) *Type and Seat of Disease.* Tables showing the type and seat of disease, in conjunction with age and with conjugal condition of the persons dying from cancer in 1947 and 1948 will be found in *Demography Bulletins* Nos. 65 and 66. A summary regarding type and seat of disease for 1948 is given below. It may be pointed out that the significance of the number of deaths shown for the various types of cancer enumerated hereunder is doubtful, owing to the fact that, in the absence of a post-mortem, it is impracticable for the certifying doctor in the majority of cases to make an accurate diagnosis as to type in the detail required for the following classification.

DEATHS FROM CANCER: TYPE AND SEAT OF DISEASE, AUSTRALIA, 1948.

Type of Disease.	Males.	Females.	Persons.	Seat of Disease.	Males.	Females.	Persons.
Cancer	203	257	460	Buccal Cavity and Pharynx ..	239	49	288
Carcinoma—				Digestive Organs and Peritoneum—			
Carcinoma Simplex	4,076	3,983	8,059	Stomach and Duodenum ..	1,180	718	1,898
Epithelioma ..	108	46	154	Rectum and Anus ..	272	190	462
Scirrhus ..	1	24	25	Colon ..	353	461	814
Rodent Ulcer ..	24	13	37	Other ..	844	690	1,534
Adeno-Carcinoma	25	48	73	Respiratory System	534	156	690
Colloid Carcinoma	..	..	..	Uterus .. ..	..	585	585
Sarcoma—				Other Female Genital Organs ..	..	288	288
Sarcoma ..	171	145	316	Breast	7	1,004	1,011
Myeloid Sarcoma	1	..	1	Male Genital Organs	612	..	612
Myeloma ..	9	6	15	Urinary Organs ..	253	146	399
Glioma ..	32	11	43	Skin	170	107	277
Adeno-Sarcoma ..	..	1	1	Brain and Nervous System ..	76	36	112
Chloroma ..	..	..	..	Other or Unspecified Organs ..	358	343	701
Endothelioma ..	8	6	14				
Melanoma—							
Melanoma ..	33	31	64				
Melanotic Sarcoma	7	14	21				
Melano-Carcinoma	2	1	3				
Embryonic Tumours—							
Hypernephroma	24	19	43				
Teratoma ..	5	..	5				
Malignant Disease..	88	99	187				
Malignant Tumour	81	69	150				
Total Deaths	4,898	4,773	9,671	Total Deaths	4,898	4,773	9,671

(c) *Age at Death.* The ages of persons who died from cancer in 1921, 1931, 1941 and 1948 are given below. Inferences drawn from the great increase in the number of deaths from cancer in 1948 compared with 1921 need qualification in view of the altered age constitution of the population since the earlier year. The number of people reaching the older ages at which cancer risks are greatest more than doubled during this period and it is only in the extreme old age-groups from 75 onwards that the rate of mortality has definitely increased. For groups up to age 75 there has been no increase in mortality rates since 1921. In the higher age-groups the increase in the rate for females has been relatively greater than that in the rate for males. It is also probable that a proportion of the increased number of deaths from cancer recorded in recent years has been due to more correct diagnosis and certification on the part of medical practitioners rather than to any actual increase in the disease itself.

CANCER : DEATHS IN AGE-GROUPS, AUSTRALIA.

Age-group (Years).	1921.			1931.			1941.			1948.		
	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.
Under 15 ..	26	23	49	25	23	48	21	25	46	42	27	69
15-19 ..	8	11	19	12	11	23	10	10	20	15	9	24
20-24 ..	6	7	13	12	14	26	15	13	28	20	11	31
25-29 ..	15	19	34	19	13	32	24	22	46	17	27	44
30-34 ..	26	45	71	26	55	81	28	45	73	36	56	92
35-39 ..	56	81	137	59	98	157	56	106	162	52	106	158
40-44 ..	81	140	221	111	173	284	92	193	285	126	190	316
45-49 ..	147	207	354	149	261	410	149	282	431	182	252	434
50-54 ..	240	263	503	261	287	548	316	403	719	298	433	731
55-59 ..	358	308	666	349	344	693	425	435	860	511	543	1,054
60-64 ..	442	349	791	510	400	919	558	491	1,049	702	616	1,318
65-69 ..	380	285	665	662	478	1,140	670	558	1,228	776	626	1,402
70-74 ..	312	234	546	609	410	1,019	753	623	1,376	782	654	1,436
75-79 ..	212	215	427	397	294	691	676	512	1,188	680	600	1,280
80-84 ..	83	89	172	187	152	339	331	330	661	436	378	814
85 and over ..	45	52	97	87	92	179	131	175	306	223	245	468
Unspecified ..	3	..	3	..	..	..	..	..	..	..	..	..
Total ..	2,440	2,328	4,768	3,484	3,105	6,589	4,255	4,223	8,478	4,898	4,773	9,671

(d) *Occupation at Death, Males.* A table showing main groups of occupations of males who died from cancer during 1948 appears in *Demography Bulletin* No. 66.

(e) *Death-rates.* The following table shows the death-rates per 100,000 of mean population from cancer in each State for 1931, 1941 and 1948. The substantial increase in the death-rate since 1931 is reflected in both sexes and in all States. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

CANCER : DEATH-RATES. (a)

State or Territory.	1931.			1941.			1948.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	99	95	97	116	107	112	124	118	121
Victoria ..	111	106	109	132	145	138	134	143	139
Queensland ..	105	77	92	100	97	99	116	104	110
South Australia..	112	124	118	112	140	126	141	145	143
Western Australia	110	81	97	135	110	123	134	106	120
Tasmania ..	100	100	100	125	127	126	112	110	111
Northern Territory	69	119	87	54	35	49	13	..	8
Australian Capital Territory ..	21	51	35	25	61	41	20	74	44
Australia ..	105	97	101	119	120	119	127	124	125

(a) Number of deaths from cancer per 100,000 of mean population.

(f) *Proportion of Total Deaths.* While the death-rate from all causes has diminished substantially in recent years, the rate from cancer has risen almost continuously, the result being that out of 10,000 deaths from all causes, 1,259 were due to cancer in 1948 compared with 735 per 10,000 total deaths during the period 1911-20. The following table shows the proportions recorded in each State and Territory for 1911-20, 1921-30, 1931-40 and 1948. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

CANCER : PROPORTION PER 10,000 TOTAL DEATHS.

State or Territory.	1911-20.			1921-30.			1931-40.			1948.		
	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.	Males.	Fe-males.	Per-sons.
N.S. Wales ..	674	806	729	900	1,070	973	1,060	1,271	1,152	1,102	1,346	1,208
Victoria ..	681	870	767	943	1,145	1,037	1,115	1,353	1,226	1,201	1,467	1,326
Queensland ..	611	741	661	866	1,009	922	1,006	1,138	1,095	1,090	1,317	1,184
South Australia ..	736	876	800	1,021	1,137	1,074	1,207	1,441	1,315	1,271	1,537	1,394
Western Australia ..	612	802	680	873	1,112	961	1,098	1,241	1,152	1,266	1,499	1,323
Tasmania ..	664	836	743	842	1,014	922	1,040	1,252	1,136	1,073	1,265	1,159
Northern Territory ..	335	426	346	621	137	565	645	811	671	179	..	137
Australian Capital Territory ..	806	625	727	233	349	271	544	898	677	286	1,333	696
Australia ..	667	826	735	912	1,091	990	1,089	1,292	1,178	1,148	1,396	1,259

(g) *Death-rates, Various Countries.* The following table shows the death-rates from cancer for Australia and each State in comparison with the rates for various other countries.

CANCER : DEATH-RATES (a), VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Ceylon	1948	14	Victoria (d) ..	1948	139
Egypt	1936	26	South Australia (d) ..	1948	143
Japan	1936	48	Canada	1948	126
Portugal	1948	49	Czechoslovakia ..	1936	126
Greece	1936	50	Netherlands	1946	127
Spain	1946	82	U.S. of America ..	1947	132
Italy	1946	93	Eire	1947	133
France	1934	96	Norway	1945	133
Hungary	1939	96	Sweden	1946	139
Poland (b) ..	1936	104	New Zealand (e) ..	1944	140
Finland	1946	107	Germany	1939	149
Belgium	1936	110	Denmark	1948	154
Union of South Africa(c)	1944	112	Switzerland	1948	163
Australia (d) ..	1948	125	Great Britain and		
Queensland (d) ..	1948	110	Northern Ireland ..	1947	184
Tasmania (d) ..	1948	111	Northern Ireland ..	1947	147
Western Australia(d)	1948	120	Scotland	1948	181
New South Wales(d)	1948	121	England and Wales	1947	186

(a) Number of deaths per 100,000 of mean population. (b) In towns with over 100,000 inhabitants. (c) European population only. (d) Excludes full-blood aborigines.

(e) Excludes Maoris.

(h) *Comparison with Tuberculosis.* In recent years the death-rate from tuberculosis has shown a tendency to decrease, while that from cancer has displayed an almost continuous increase. The table hereunder shows that for each of the periods under review the decline in the death-rate from tuberculosis has been accompanied by an almost equal increase in the rate for cancer. Thus in the forty-five years comprised in the five-yearly averages shown below the death-rate for tuberculosis declined by 57 while the rate of cancer increased by 57 per 100,000 persons. This equal but opposite tendency may be demonstrated by stating that the death-rate from tuberculosis and cancer combined remained almost constant in each period, the figures being :—1901-05, 152 deaths per 100,000 persons; 1906-10, 145; 1911-15, 152; 1916-20, 154; 1921-25, 153; 1926-30, 152; 1931-35, 150; 1936-40, 154; 1941-45, 156; and 1948, 153.

TUBERCULOSIS AND CANCER : DEATH-RATES(a), AUSTRALIA.

Period.	Death-rate from Tuberculosis.			Death-rate from Cancer.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
1901-05 ..	100	77	89	64	61	63
1906-10 ..	81	69	75	71	70	70
1911-15 ..	84	69	77	75	74	75
1916-20 ..	84	59	71	86	80	83
1921-25 ..	71	52	62	93	88	91
1926-30 ..	64	49	57	97	94	95
1931-35 ..	52	37	45	108	102	105
1936-40 ..	47	31	39	116	113	115
1941-45 ..	45	26	36	118	131	120
1948.. ..	38	19	28	127	124	125

(a) Number of deaths per 100,000 of mean population.

(iv) *Diseases of the Heart* (42 to 46). The number of deaths in 1948 was 24,262, namely, 14,199 males and 10,063 females. Details for each individual disease of the heart may be obtained from *Demography Bulletin* No. 66. The sex and territorial distribution of the deaths will be found in the table below. This class is the largest among causes of death, the death-rate having grown from 1,019 per million in 1911-15 to 2,705 in 1939-43 and 3,146 in 1948. The increase in the number of deaths recorded from heart diseases has been particularly pronounced during the past sixteen years. The rapid increase in mortality is partly a reflection of the ageing of the population, but the figures have been influenced mainly by improved diagnosis and certification by medical practitioners. Many deaths of elderly people, formerly attributed to senility or other indefinite causes, are believed to be now more frequently certified as associated with some form of heart disease, usually myocardial degeneration. The improvement in diagnosis has been particularly evident in the case of diseases of the coronary arteries. As a result of a change of classification adopted in 1931, all forms of this disease have been included since that year among heart diseases. Although deaths recorded from diseases of the coronary arteries were not numerically important in 1931, this type of disease has since become prominent in medical science, and in 1948 the number of deaths assigned to this cause was 7,800, an increase of 7,236, or over 1,380 per cent., since 1931. The number of deaths, death-rates and proportions per 10,000 deaths in 1948 are given in the following table. Corresponding figures for 1917 may be obtained from *Demography Bulletin* No. 65.

DISEASES OF THE HEART : DEATHS, DEATH-RATES AND PROPORTION PER 10,000 TOTAL DEATHS, 1948.

State or Territory.	Number of Deaths.			Death-rates.(a)			Proportion per 10,000 Total Deaths.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	5,861	4,089	9,950	387	270	328	3,430	3,070	3,273
Victoria ..	3,921	3,175	7,096	380	300	340	3,409	3,076	3,251
Queensland ..	1,864	1,100	2,964	324	201	264	3,042	2,537	2,833
South Australia ..	1,193	847	2,040	365	256	310	3,296	2,707	3,023
Western Australia	904	519	1,423	342	207	276	3,232	2,749	3,037
Tasmania ..	430	323	753	320	248	285	3,076	2,858	2,979
Northern Territory	10	1	11	125	24	90	1,785	588	1,506
Australian Capital Territory ..	16	9	25	159	111	138	2,285	2,000	2,174
Australia ..	14,199	10,063	24,262	367	262	315	3,329	2,944	3,158

(a) Number of deaths from diseases of the heart per 100,000 of mean population.

(v) *Diarrhœa and Enteritis (Children under two years of age)* (54). The number of deaths due to these causes was 335 in 1948 compared with an average of 284 for the previous five years. During 1948, 5,475 children died before reaching their second birthday, and of these 6.1 per cent. died from diarrhœa and enteritis. The ages of children dying from these diseases during the first year of life will be found on page 621.

The number of deaths under 2 years of age due to diarrhœa and enteritis, the death-rates, and proportions per 10,000 deaths for 1911-15, 1921-25, 1931-35, 1936-40, 1941-45 and 1948 are given in the following table. (Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65. Reference to the last five lines of the table reveals a general decrease in the number of deaths due to these diseases. Although there were increases in 1947 and 1948 they were still below the averages for the five-yearly periods shown below. In view of changed birth-rates, however, the death-rates per 100,000 of mean population are not true measures of changes in the force of mortality. A better measure would be the estimated number of children in every 1,000 born who died from these diseases before reaching their second birthday. The numbers are estimated to be as follows :—

Period—	1911-15	Males, 24.6	Females, 20.9	Total, 22.8
"	1921-25	" 16.5	" 13.3	" 14.9
"	1931-35	" 3.7	" 2.8	" 3.3
"	1936-40	" 3.4	" 2.7	" 3.0
"	1941-45	" 2.7	" 2.1	" 2.4

DIARRHŒA AND ENTERITIS (UNDER 2 YEARS OF AGE) : DEATHS, DEATH-RATES AND PROPORTION PER 10,000 TOTAL DEATHS.

State or Territory.	Number of Deaths.			Death-rates.(a)			Proportion per 10,000 Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	78	44	122	5	3	4	46	33	40
Victoria ..	34	25	59	3	2	3	30	24	27
Queensland ..	38	29	67	7	5	6	62	67	64
South Australia..	35	33	68	11	10	10	97	105	101
Western Australia	8	5	13	3	2	3	29	26	28
Tasmania ..	4	2	6	3	2	2	29	18	24
Northern Territory	..	..	..	..	..	..	..	..	..
Australian Capital Territory ..	..	..	..	..	..	..	..	..	..
Australia, 1948 ..	197	138	335	5	4	4	46	40	44
Annual Average—									
1911-15 ..	1,687	1,354	3,041	68	59	64	569	627	593
1921-25 ..	1,114	859	1,973	38	31	35	362	366	364
1931-35 ..	234	175	409	7	5	6	70	68	69
1936-40 ..	212	159	371	6	5	5	57	54	56
1941-45 ..	200	150	350	5	4	5	51	46	49

(a) Number of deaths from these diseases per 100,000 of mean population.

(vi) *Puerperal Causes* (68 to 72). The 250 deaths in 1948 from puerperal causes correspond to a death-rate of 9.6 per 100,000 females. The rate is also equivalent to 1.40 deaths per 1,000 live births. The death-rate may be expressed in other terms by stating that 1 of every 704 women giving birth to a live child in 1948 died from puerperal causes; the corresponding ratios for married women were 1 of every 751, and for single women 1 in every 285. More detailed information will be found in a series of tables in *Demography Bulletin* No. 66.

The following table shows the death-rate per 1,000 live births from puerperal causes in various countries. Care is needed in comparing the Australian rates with the figures for other countries. In the rates for the States and Australia deaths from criminal abortion have been excluded from puerperal infection but included with deaths from other puerperal causes and in the total. Definite information is not available as to the practice in other countries but it is very probable that the rates for many of the countries given hereunder totally exclude deaths from criminal abortion.

CHILD-BIRTH: DEATHS PER 1,000 LIVE BIRTHS, VARIOUS COUNTRIES.

Country.	Year.	Rates per 1,000 Live Births from—		
		Puerperal Infection.	Other Puerperal Causes.	All Puerperal Causes.
Denmark	1948	0.08	0.83	0.91
Sweden	1946	0.11	0.85	0.96
Great Britain and Northern Ireland ..	1947	0.19	1.12	1.31
<i>England and Wales</i>	1947	0.16	1.03	1.19
<i>Scotland</i>	1948	0.30	1.29	1.59
<i>Northern Ireland</i>	1947	0.29	1.56	1.85
Netherlands	1946	0.45	0.87	1.32
United States of America	1947	0.27	1.07	1.34
Australia (a)	1948	0.23	1.17	1.40
<i>Victoria (a)</i>	1948	0.20	1.17	1.37
<i>New South Wales (a)</i>	1948	0.21	1.16	1.37
<i>South Australia (a)</i>	1948	0.19	1.20	1.39
<i>Queensland (a)</i>	1948	0.21	1.26	1.47
<i>Western Australia (a)</i>	1948	0.47	1.08	1.55
<i>Tasmania (a)</i>	1948	..	1.58	1.58
Canada	1948	0.26	1.21	1.47
Italy	1946	0.46	1.20	1.66
Switzerland	1948	0.05	1.70	1.75
Eire	1947	0.45	1.44	1.89
Belgium	1948	0.50	1.60	2.10
Union of South Africa (b)	1944	0.60	1.51	2.20
Portugal	1948	0.93	1.31	2.24
Japan	1936	0.64	1.67	2.31
France	1934	1.00	1.50	2.50
Norway	1944	1.29	1.23	2.52
New Zealand (c)	1944	0.57	2.14	2.71
Spain	1935	2.00	1.40	3.40
Egypt (d)	1943	0.59	2.89	3.48
Hungary	1939	2.11	1.72	3.83
Greece	1936	2.20	2.00	4.20
Germany	1935	1.99	2.86	4.85
Czechoslovakia	1936	2.88	2.03	4.91
Ceylon	1948	1.76	6.50	8.26

(a) Excludes full-blood aborigines.
(d) Localities having Health Bureaux.

(b) European population only.

(c) Excludes Maoris.

A tabulation of puerperal causes for Australia according to age at death for married and single women separately will also be found in *Demography Bulletin* No. 66.

The total number of children left by the 225 married mothers who died from puerperal causes in 1948 was 519, an average of 2.3 children per mother.

Nine of the mothers who died had been married less than one year, 27 between one and two years, and 27 between two and three years. The duration of marriage ranged up to 24 years. Tabulations distinguishing the ages at marriage and at death will be found in *Demography Bulletin* No. 66, which also includes a table showing in combination the duration of marriage and previous issue.

(vii) *Congenital Malformation, Debility, Premature Birth, etc.* (75 to 79). The deaths under this heading in 1948 numbered 3,624 of which 3,477 were of children under one year of age. Of all deaths of children under one year of age 70 per cent. were due to these causes. The number of deaths for 1948 is given in the following table. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

DEATHS FROM CONGENITAL MALFORMATION, DEBILITY, ETC., 1948.

State or Territory.	Congenital Malformation.			Premature Birth and Injury at Birth.			Congenital Debility and other Diseases peculiar to the First Year of Life.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	189	150	339	538	355	893	156	92	248
Victoria ..	100	82	182	292	211	503	81	53	134
Queensland ..	62	47	109	222	157	379	53	38	91
South Australia ..	37	36	73	97	97	194	27	21	48
Western Australia	44	35	79	94	64	158	21	17	38
Tasmania ..	14	12	26	63	37	100	5	6	11
Northern Territory	..	..	..	1	2	3	..	..	..
Australian Capital Territory ..	2	1	3	9	4	13	..	..	..
Australia ..	448	363	811	1,316	927	2,243	343	227	570
Number of deaths under one year	375	289	664	1,316	927	2,243	343	227	570
Number of deaths under one year per 1,000 births	4.11	3.33	3.73	14.41	10.70	12.60	3.75	2.62	3.20

(viii) *Suicide* (81). (a) *General*. Deaths from suicide in 1948 numbered 737, compared with an annual average of 624 during 1911-15, 621 during 1921-25, 798 during 1931-35 and 568 during 1941-45.

(b) *Modes Adopted.* The modes adopted by persons who committed suicide in 1947 and 1948 were as follows :—

SUICIDE : MODES ADOPTED, AUSTRALIA.

Mode of Death.	Males.		Females.		Persons.	
	1947.	1948.	1947.	1948.	1947.	1948.
Poisoning	72	99	70	61	142	160
Poisonous gas	35	62	34	29	69	91
Hanging or strangulation ..	111	131	27	19	138	150
Drowning	35	30	36	27	71	57
Firearms and explosives ..	177	165	12	9	189	174
Cutting or piercing instruments ..	75	65	9	6	84	71
Jumping from high places ..	15	10	9	5	24	15
Crushing	1	..	..	..	1	..
Other modes	25	16	3	3	28	19
Total	546	578	200	159	746	737

(c) *Death-rates.* The death-rates from suicide and the proportion per 10,000 of total deaths are given in the following table for each year 1944 to 1948, corresponding rates for the periods 1911-15, 1921-25, 1931-35 and 1941-45 being shown at the foot of the table :—

SUICIDE : DEATHS, DEATH-RATES AND PROPORTION PER 10,000 TOTAL DEATHS.

State or Territory.	Number of Deaths.			Death-rates.(a)			Proportion per 10,000 Total Deaths.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New South Wales	246	74	320	16	5	11	144	56	105
Victoria ..	127	40	167	12	4	8	110	39	77
Queensland ..	93	24	117	16	4	10	152	55	112
South Australia ..	37	6	43	11	2	7	102	19	64
Western Australia	48	10	58	18	4	11	172	53	124
Tasmania ..	19	4	23	14	3	9	136	35	91
Northern Territory	3	..	3	38	..	25	536	..	410
Australian Capital Territory ..	5	1	6	50	12	33	714	222	522
Australia 1948 ..	578	159	737	15	4	10	136	47	96
„ 1947 ..	546	200	746	15	5	10	134	61	102
„ 1946 ..	513	219	732	14	6	10	124	66	98
„ 1945 ..	394	173	567	11	5	8	103	54	81
„ 1944 ..	362	178	540	10	5	7	96	56	78
Annual Average—									
1941-45 ..	405	163	568	11	5	8	102	50	79
1931-35 ..	635	163	798	19	5	12	190	62	134
1921-25 ..	509	112	621	18	4	11	166	48	114
1911-15 ..	509	115	624	21	5	13	172	53	122

(a) Number of deaths from suicide per 100,000 of mean population.

(d) *Age at Death.* From the following table which shows the age of persons who committed suicide in 1947 and 1948 it will be seen that both young and extremely old people took their lives during these years.

AGE OF PERSONS WHO COMMITTED SUICIDE : AUSTRALIA.

Age-group (Years).	1947.			1948.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
10-14	1	..	1	4	..	4
15-19	12	4	16	22	2	24
20-24	19	11	30	34	5	39
25-29	28	19	47	36	14	50
30-34	34	16	50	37	16	53
35-39	44	22	66	33	20	53
40-44	55	16	71	57	6	63
45-49	61	19	80	64	15	79
50-54	53	21	74	58	28	86
55-59	67	18	85	66	14	80
60-64	56	24	80	56	13	69
65-69	43	15	58	36	12	48
70-74	27	9	36	28	5	33
75-79	28	5	33	22	4	26
80-84	14	..	14	15	2	17
85-89	4	1	5	8	3	11
90 and over ..	..	..	..	1	..	1
Unspecified..	..	..	..	1	..	1
Total Deaths ..	546	200	746	578	159	737

(e) *Occupation at Death, Males.* A table showing main groups of occupations of males who committed suicide during 1948 appears in *Demography Bulletin* No. 66.

(f) *Death-rates, Various Countries.* The following table shows the death-rate from suicide for Australia and each State in comparison with the rates for various other countries. The table indicates that Australia occupies a fairly favourable position as regards the death-rate from suicide.

SUICIDE : DEATH-RATES (a), VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Egypt	1936	2.0	Great Britain and Northern Ireland ..	1947	9.8
Eire	1947	2.4	Northern Ireland ..	1947	3.4
Italy	1946	5.3	Scotland	1948	6.6
Greece	1936	5.7	England and Wales	1947	10.5
Ceylon	1948	6.4	New Zealand (a) ..	1944	10.0
Union of South Africa (b)	1944	7.1	U.S. of America ..	1947	11.5
Spain	1946	7.2	Finland	1946	15.0
Netherlands ..	1946	7.7	Japan	1936	15.1
Canada	1948	7.8	Sweden	1946	15.5
Norway	1945	9.3	Belgium	1935	16.8
Portugal	1948	9.5	France	1934	21.4
Australia (c) ..	1948	9.6	Poland (e)	1936	22.0
South Australia (c)	1948	6.5	Switzerland	1948	22.5
Victoria (c) ..	1948	8.0	Denmark	1948	25.1
Tasmania (c) ..	1948	8.7	Hungary	1939	26.0
Queensland (c) ..	1948	10.4	Czechoslovakia ..	1936	27.8
New South Wales (c)	1948	10.6	Germany	1939	28.0
Western Australia (c)	1948	11.3			

(a) Number of deaths per 100,000 of mean population.

(b) European population only.

(c) Excludes full-blooded aborigines.

(d) Excludes Maoris.

(e) In towns with over 100,000 inhabitants.

(ix) *Homicide* (82). Deaths from homicide in 1948 numbered 88, which was 3 less than in the previous year and 5 more than the average for the five years 1941 to 1945, namely, 83. See par. (x).

(x) *Accidental or Violent Deaths (including Suicide and Homicide)*. The following table shows the various kinds of violent deaths, including suicides and homicides, recorded in Australia for 1948. Corresponding figures for 1947 may be obtained from *Demography Bulletin* No. 65.

DEATHS FROM EXTERNAL VIOLENCE : AUSTRALIA, 1948.

Cause of Death.	Males.	Females.	Persons.
Suicide (<i>see par. (viii)</i>)	578	159	737
Homicide	52	36	88
Accidents on railways	160	18	178
Automobile accidents	1,097	231	1,328
Other road transport accidents	104	19	123
Water transport accidents	21	..	21
Air transport accidents	46	6	52
Accidents in mines and quarries	44	..	44
Agricultural and forestry accidents	83	..	83
Accidents caused by machinery (n.e.i.)	36	1	37
Accidental poisoning	57	39	96
Accidental burns (including conflagration)	136	67	203
Accidental mechanical suffocation	41	26	67
Accidental drowning	311	61	372
Accidental injury by firearms	62	4	66
Accidental injury by cutting or piercing instruments	1	..	1
Accidental injury by fall, crushing, landslide, etc... .. .	434	487	921
Injuries by animals (n.e.i.)	17	2	19
Hunger or thirst	2	..	2
Excessive cold	3	..	3
Excessive heat	10	6	16
Electricity (including lightning)	51	4	55
Attack by venomous animals	6	3	9
Other accidents	176	67	243
Legal executions .. .. .	..	..	..
External Violence, excluding Suicide and Homicide	2,898	1,041	3,939
Total Deaths from External Violence	3,528	1,236	4,764

The following table of death-rates per million of mean population reveals a decrease in 1921-25 for External Violence, excluding Suicide and Homicide, but an increase in the rates for 1926-30 to which the growth of automobile accidents contributed very largely. A decreased death-rate was recorded during 1931-35, but the rate rose again during 1936-40. The sharp decline during 1941-45 may be attributed to the decrease in number of automobile accidents which resulted from the war-time restrictions of travel.

DEATH-RATES, ETC., EXTERNAL VIOLENCE : AUSTRALIA.

Period.	Death-rates(a) from Homicide.			Death-rates(a) from External Violence, excluding Suicide and Homicide.			Death-rates(a) from all External Violence.			All External Violence Proportion per 10,000 Deaths.
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Persons.
1911-15 ..	21	16	19	948	268	621	1,170	330	770	718
1921-25 ..	17	13	15	753	211	487	950	260	610	643
1926-30 ..	19	15	17	843	240	549	1,070	300	690	746
1931-35 ..	21	11	16	714	223	472	923	284	609	676
1936-40 ..	18	9	13	862	283	576	1,069	342	699	725
1941-45 ..	14	9	11	670	261	466	795	315	557	558
1943 ..	14	7	10	647	260	454	764	306	536	520
1944 ..	17	12	15	613	258	436	729	319	525	551
1945 ..	14	7	11	571	255	413	692	309	501	526
1946 ..	14	10	12	728	289	510	881	359	621	621
1947 ..	13	11	12	743	289	517	900	353	627	647
1948 ..	13	9	11	750	271	511	912	321	618	620

(a) Number of deaths per 1,000,000 of mean population.

(xi) "Other Diseases". The intermediate and the abridged classifications of causes of death used in Tables A to E in preceding pages differ from those used in issues of the Official Year Book prior to No. 25 in that no residue of "other diseases" is shown at the foot. The items are ranged in classes or groups of classes and each class or group of classes is made complete by the addition of an "other diseases" item for that class or group of classes. Details of these "other diseases" items of the intermediate classification expanded into their constituent causes may be found in *Demography Bulletin* No. 66.

The following table shows the number of deaths during each of the five years 1944 to 1948 from the four most important "other" infective and parasitic diseases.

DEATHS FROM OTHER DISEASES : AUSTRALIA.

Causes.	1944.	1945.	1946.	1947.	1948.
MALES.					
Cerebro-spinal meningococcal meningitis ..	73	39	42	36	38
Tetanus	36	40	55	48	54
Acute poliomyelitis and polioencephalitis ..	7	44	62	11	34
Hodgkin's disease	49	42	52	61	64
FEMALES.					
Cerebro-spinal meningococcal meningitis ..	47	31	32	21	30
Tetanus	25	20	16	23	23
Acute poliomyelitis and polioencephalitis ..	15	32	37	11	21
Hodgkin's disease	43	36	32	23	37
PERSONS.					
Cerebro-spinal meningococcal meningitis ..	120	70	74	57	68
Tetanus	61	60	71	71	77
Acute poliomyelitis and polioencephalitis ..	22	76	99	22	55
Hodgkin's disease	92	78	84	84	101

17. Causes of Deaths in Classes.—The figures in the preceding sub-sections relate to specific causes of death, and are of greater value in medical statistics than a mere grouping under general headings. The classification under eighteen general headings adopted by the compilers of the International Nomenclature is, however, shown in the following table for 1948, together with the death-rates and proportions of total deaths

pertaining to those classes. A further table furnishes the death-rates for the five-year periods 1921-25, 1931-35 and 1941-45. Figures for 1947 corresponding to the first table may be obtained from *Demography Bulletin* No. 65.

DEATHS, DEATH-RATES, ETC., IN CLASSES : AUSTRALIA, 1948.

Class.	Total Deaths.			Death-rates.(a)			Proportion per 10,000 Deaths.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Infective and Parasitic Diseases	2,336	1,337	3,673	60	35	48	548	391	478
2. Cancer and Other Tumours	5,087	4,982	10,069	131	130	131	1,193	1,457	1,310
3. Rheumatism, Diseases of Nutrition and of the Endocrine Glands, Other General Diseases and Vitamin-deficiency Diseases	689	1,294	1,983	18	34	26	162	379	258
4. Diseases of the Blood and Blood-forming Organs	334	313	647	9	8	8	78	92	84
5. Chronic Poisoning and Intoxication	124	38	162	3	1	2	29	11	21
6. Diseases of the Nervous System and Sense Organs	4,180	5,191	9,371	108	135	122	980	1,519	1,220
7. Diseases of the Circulatory System	15,232	11,090	26,322	394	288	341	3,571	3,244	3,426
8. Diseases of the Respiratory System	3,258	2,530	5,788	84	66	75	764	740	753
9. Diseases of the Digestive System	1,844	1,328	3,172	48	34	41	432	388	413
10. Diseases of the Genito-urinary System	2,621	1,737	4,358	68	45	56	614	508	567
11. Diseases of Pregnancy, Child-birth and Puerperal State	..	250	250	..	6	3	..	73	33
12. Diseases of the Skin and Cellular Tissue	33	32	65	1	1	1	8	9	8
13. Diseases of the Bones and Organs of Movement	28	29	57	1	1	1	6	8	7
14. Congenital Malformations	448	363	811	12	9	10	105	106	106
15. Diseases Peculiar to the First Year of Life	1,659	1,154	2,813	43	30	37	389	338	366
16. Senility, Old-age	1,134	1,215	2,349	29	32	31	266	356	306
17. Violent or Accidental Deaths	3,528	1,236	4,764	91	32	62	827	362	620
18. Ill-defined Causes of Death	120	65	185	3	2	2	28	19	24
Total	42,655	34,184	76,839	1,103	889	997	10,000	10,000	10,000

(a) Number of deaths per 100,000 of mean population.

DEATH-RATES(a) IN CLASSES : AUSTRALIA.

Class.	1921-25.			1931-35.			1941-45.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Infective and Parasitic Diseases	..	..	..	92	70	81	77	48	63
2. Cancer and Other Tumours	..	..	..	113	108	110	123	128	126
3. Rheumatism, Diseases of Nutrition and of the Endocrine Glands, Other General Diseases and Vitamin-deficiency Diseases	248	222	236	18	33	25	19	37	28
4. Diseases of the Blood and Blood-forming Organs	..	..	..	9	9	9	7	8	8
5. Chronic Poisoning and Intoxication	..	..	..	2	..	1	2	1	1
6. Diseases of the Nervous System and Sense Organs	93	83	88	66	67	67	98	122	110
7. Diseases of the Circulatory System	150	118	131	249	200	225	351	269	312
8. Diseases of the Respiratory System	121	88	105	101	75	88	89	68	78
9. Diseases of the Digestive System	97	81	89	60	46	53	55	40	47
10. Diseases of the Genito-urinary System	72	49	60	81	59	70	81	55	68
11. Diseases of Pregnancy, Child-birth and Puerperal State	..	25	12	..	19	9	..	13	6
12. Diseases of the Skin and Cellular Tissue	6	4	5	3	3	3	2	2	2
13. Diseases of the Bones and Organs of Movement	3	2	2	3	1	2	2	1	1
14. Congenital Malformations	12	10	11	11	8	10	11	10	11
15. Diseases Peculiar to the First Year of Life	73	56	65	44	34	39	46	34	40
16. Senility, Old-age	76	68	72	42	42	42	38	56	37
17. Violent or Accidental Deaths	95	26	61	92	28	61	79	31	56
18. Ill-defined Causes of Death	15	9	12	7	2	5	5	2	3
Total	1,061	841	952	993	804	900	1,088	905	997

(a) Number of deaths per 100,000 of mean population.

18. Age at Death of Married Males and Females, and Issue.—*Demography Bulletin* No. 66 contains a number of tables showing, in combination with the issue, the age at marriage, age at death and occupation of married persons who died in Australia in 1948. Deaths of married males in 1948 numbered 30,234, and of married females, 26,238. The tabulations which follow deal, however, with only 29,711 males and 25,958 females, the information regarding issue in the remaining 803 cases being incomplete. The total number of children in the families of the 29,711 males was 104,942, and of the 25,958 females, 99,680. The average number of children is shown for various age-groups in the following table :—

AGE AT DEATH, AND AVERAGE ISSUE OF MARRIED MALES AND FEMALES : AUSTRALIA.

Age-group (Years).	Average Issue.									
	Males.					Females.				
	1911.	1921.	1931.	1941.	1948.	1911.	1921.	1931.	1941.	1948.
Under 20 ..	0.33	..	0.75	..	..	0.94	0.77	0.66	0.79	0.40
20-24 ..	0.77	0.84	0.81	0.73	0.71	1.27	1.22	1.13	0.95	0.86
25-29 ..	1.25	1.20	1.33	1.12	1.23	1.82	1.86	1.81	1.45	1.32
30-34 ..	2.05	2.06	1.79	1.76	1.63	2.74	2.45	2.34	1.91	1.86
35-39 ..	2.80	2.58	2.13	2.11	2.19	3.04	3.29	2.89	2.30	2.14
40-44 ..	3.47	3.23	2.77	2.49	2.29	4.09	3.66	3.29	2.77	2.61
45-49 ..	4.09	3.48	3.10	2.68	2.46	4.54	3.76	3.55	2.93	2.69
50-54 ..	4.75	3.76	3.46	2.96	2.69	5.35	4.23	3.60	3.29	2.79
55-59 ..	5.44	4.41	3.69	3.28	2.97	5.86	4.69	4.01	3.55	3.23
60-64 ..	5.95	4.98	4.02	3.55	3.17	5.99	5.39	4.21	3.79	3.40
65-69 ..	6.23	5.50	4.41	3.73	3.36	6.50	5.86	4.82	4.01	3.64
70-74 ..	6.41	6.06	5.06	4.17	3.72	6.38	6.30	5.41	4.29	3.92
75-79 ..	6.75	6.66	5.65	4.56	4.03	6.72	6.56	6.02	4.85	4.19
80-84 ..	6.68	6.89	6.17	4.93	4.49	6.22	6.76	6.26	5.39	4.53
85-89 ..	6.67	7.18	6.59	5.70	4.75	5.97	6.93	6.57	5.85	5.02
90-94 ..	6.03	7.21	6.94	6.57	5.41	5.69	6.53	6.73	6.11	5.66
95-99 ..	7.30	6.97	6.69	7.04	5.85	5.05	6.05	7.10	6.34	6.23
100 and over	9.33	9.20	7.00	8.69	7.00	5.17	5.11	8.20	6.73	6.25
Age not stated	4.33	5.36	5.00	..	1.33	4.60	5.80	5.00	..	2.00
All Ages ..	5.42	4.97	4.44	3.91	3.53	5.35	5.05	4.72	4.22	3.84

The figures in the preceding table include the issue both living and dead, the proportion between them, taking the issue of deceased males and females together, being about five to one. The totals are shown in the following table :—

ISSUE OF DECEASED MARRIED MALES AND FEMALES : AUSTRALIA, 1948.

Issue of Married Males.	Males.			Issue of Married Females.	Females.		
	Males.	Females.	Total.		Males.	Females.	Total.
Living ..	44,792	44,409	89,201	Living ..	40,007	40,461	80,468
Dead ..	9,257	6,484	15,741	Dead ..	11,162	8,050	19,212
Total ..	54,049	50,893	104,942	Total ..	51,169	48,511	99,680

19. Age at Marriage of Deceased Males and Females, and Issue.—While the table giving the average issue of married males and females naturally shows an increase in the averages with advancing age at death, the following table which gives the average

issue of males and females according to the age at marriage of the deceased parent shows a corresponding decrease in the averages as the age at marriage advances :—

AGE AT MARRIAGE OF DECEASED MALES AND FEMALES, AND AVERAGE ISSUE : AUSTRALIA.

Age-group (Years).	Average Issue.									
	Males.					Females.				
	1911.	1921.	1931.	1941.	1948.	1911.	1921.	1931.	1941.	1948.
Under 15 ..	..	..	..	..	..	9.71	7.60	6.36	7.80	4.78
15-19 ..	6.97	6.32	6.15	5.40	5.39	7.10	6.97	6.79	6.10	5.65
20-24 ..	6.34	6.05	5.56	4.89	4.39	5.77	5.50	5.23	4.80	4.43
25-29 ..	5.70	5.17	4.70	4.21	3.73	4.27	4.09	3.79	3.51	3.23
30-34 ..	4.92	4.45	3.96	3.41	3.19	3.04	2.66	2.42	2.35	2.21
35-39 ..	4.05	3.90	3.14	2.80	2.57	1.68	1.61	1.40	1.26	1.25
40-44 ..	3.43	2.67	2.36	2.01	1.83	0.72	0.62	0.39	0.35	0.48
45-49 ..	2.59	2.20	1.96	1.52	1.47	0.26	0.03	0.12	0.01	0.35
50-54 ..	2.45	1.70	1.60	1.05	0.89	..	..	..	..	..
55-59 ..	1.66	1.30	0.95	0.79	0.95	..	..	..	..	..
60-64 ..	2.00	0.33	0.63	0.29	0.62	..	..	..	..	..
65 and over ..	1.00	0.25	0.18	0.01	0.74	..	..	..	..	..
Age unspecified	5.40	4.93	3.64	2.95	3.23	5.23	5.41	3.96	2.45	2.79
All Ages ..	5.42	4.97	4.44	3.91	3.53	5.35	5.05	4.72	4.22	3.84

20. Birthplace of Deceased Married Males and Females, and Issue.—A table showing the birthplaces of married males and females who died in 1911 and 1940, together with the average issue, may be found in the Official Year Book No. 34, p. 366.

21. Occupation of Deceased Married Males, and Issue.—A summary of the main groups of occupations of married males who died during 1948, together with issue, appears in *Demography Bulletin* No. 66.

§ 4. Registration of Births, Deaths and Marriages in the Australian Capital Territory.

To the end of 1929 the provisions of the Registration of Births, Deaths and Marriages Act of 1800 and the Marriage Act of 1800 of New South Wales applied to the Australian Capital Territory. Births, deaths and marriages occurring within the Territory were registered by the District Registrars at Queanbeyan and Nowra, and were incorporated in the New South Wales records.

In 1929, however, the Registration of Births, Deaths and Marriages Ordinances were enacted, providing for the assumption by the Commonwealth Government of the function of registration within the Territory as from 1st January, 1930. All registrations are made at the Registrar's Office, Civic Centre, Canberra.

Marriages within the Territory are celebrated according to the conditions prescribed by the Marriage Ordinance 1929-1938. This Ordinance, which closely follows the provisions of the Marriage Act of New South Wales, which it supersedes as regards the Australian Capital Territory, came into operation on 1st January, 1930.

CHAPTER XV.

LOCAL GOVERNMENT.

§ 1. Introduction.

1. **General.**—The statistics on Local Government operations are not entirely satisfactory, as they are incomplete, and not sufficiently comparable and up to date. Those on Local Government financial operations were improved, prior to the 1939-45 War, through the use by the State Statisticians of standard forms in supplying information on their respective States to the Commonwealth Statistician. The presentation of the statistics thus made available was only being developed when the war made it necessary to discontinue the returns. However, since the war they have been recommenced, and the matter in § 2, advanced and extended in the previous issue of the Official Year Book, has been further extended, particularly in regard to Local Government (and Semi-governmental) debt.

Efforts are being made, as opportunity and circumstances permit, to widen the range of information presented on local government activities beyond the purely, or primarily, financial.

2. **Local Government Authorities.**—In each State of the Commonwealth there exists a system of local government whose powers and responsibilities are in general similar, covering such matters as the upkeep and construction of roads and bridges, water and sewerage systems (except in most of the chief cities), health, sanitary services and conditions, lighting, supervision of building, and the administration of acts dealing with certain subjects (e.g., dog acts, food and drug acts, slaughtering acts, weights and measures acts, etc.). In addition to these obligatory functions there are also a large number which may be performed by local government authority either with or without the consent of the ratepayers or the governor-in-council. These include transport facilities, electricity, gas and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the governor-in-council. Otherwise, within the scope of the acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers.

While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc., differ considerably.

The areas over which local government bodies exercise general control, numbering 970, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as municipal corporation areas and district council areas; in Western Australia as municipalities and road districts; and in Tasmania as municipalities. In New South Wales some local government authorities in an area have combined to provide services such as electricity supply and water and sewerage—e.g., the county councils. There are also some municipal units within shires known as urban areas. In Western Australia there are local health boards, whose personnel in most cases coincides with those of municipalities and road boards. Apart from the more thinly populated parts of New South Wales and South Australia and the Federal Territories, practically the whole of Australia comes within local government jurisdiction.

The financial statistics in § 2. following are classified under the headings of Ordinary Services and Business Undertakings, the former covering the obligatory and general functions referred to above and also those other functions apart from business undertakings. Business Undertakings includes particulars of public utilities such as water supply and sewerage, electricity and gas, transport and hydraulic power undertakings, and other miscellaneous works such as abattoirs, quarries, ice works, cinemas, etc.

A description of the various systems of municipal governments in the different States, and their development from the earliest date, was published in 1919 by this Bureau in a separate work entitled *Local Government in Australia*. In this publication the systems in force at that time are examined, the development of local government in Australia is traced since its inception, and all available statistical information is collected.

3. Semi-Governmental Authorities.—The business undertakings covered by the statistics in § 2 do not include all those public business undertakings whose finances do not form part of the general budget revenue and expenditure of the central government. There is also a large number of authorities set up to control specific activities.

Their forms of activity are often identical with some of those performed by either, or both, of the other classes of public authority—central government and local government—and a complete picture of any field of activity for the State or Australia as a whole cannot be obtained without reference to each class operating in that particular field. These semi-governmental authorities differ primarily from local government authorities in that the operations of each of the former are restricted to the one or two forms of activity for which it was specifically constituted—e.g. roads and bridges, or water and sewerage, or electricity and irrigation, or harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct from the general services of the local authority. (It may be well to note here that the county councils in New South Wales, although constituted for a specific purpose or purposes, are included as local government authorities in § 2, because they are combinations of municipalities and shires.)

Sections 4 to 7 following, dealing with roads and bridges, water supply and sewerage, harbours and fire brigades, include particulars of the more important of these authorities which operate within the range covered by this chapter. A detailed list of the authorities classed as semi-governmental from whom returns of loan operations are received appears on pages 662–3, § 3, par. 2 following.

4. Roads, Bridges, etc.—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in each State there exists a central road authority or a Government department whose duties relate to the construction and maintenance of “main” and “developmental” roads, the distribution of funds to local bodies, and the supervision and co-ordination of road construction and policy throughout the State. Although roads and bridges constructed and maintained directly by the Government or by the central road authority do not properly come under the heading of “Local Government”, they have been included in this chapter for the sake of convenience. Owing to difficulty in obtaining complete particulars of receipts and expenditure by the various local governing bodies in regard to roads under their control, the details of receipts and expenditure given in § 4 are those of the Government only, relating either to the supervisory board or commission in the State or to direct activities of a department. In § 2 some information is given of the revenue and expenditure of Local Government Authorities in respect of roads.

5. Water Supply and Sewerage.—In the cities of Sydney and Melbourne the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth these services are under the direct supervision of Government departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the Government.

6. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested, or are appointed by the Government. In a few instances, however, they are directly controlled by the Government.

7. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. These Boards usually comprise members elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, and one or more members appointed by the Government. Occasionally volunteer or country fire brigades are represented.

8. **Other Local Government Activity.**—The activities referred to above are not the only forms of local government undertakings. There are others, the most important being tramways and omnibus services, and electric light and gas undertakings, whose control generally is less restricted to local government authorities. These are not dealt with in this chapter, except to the extent that they are represented in the finances as shown in the following section. Chapter V.—Transport and Communication contains information on municipal transport services, while particulars of electric light and gas undertakings, although not shown separately, are included in the relevant sections in Chapter XXIV.—Manufacturing Industry.

§ 2. Local Government Authorities.

1. **Area, Population, Dwellings and Value of Ratable Property.**—(i) *New South Wales.* For purposes of local government the whole of the Eastern and Central land divisions and a small portion of the sparsely populated Western division have been divided into cities, municipalities (most principal towns) and shires (mainly large rural areas, some of which embrace important towns). At the end of 1946 the area incorporated was 184,000 square miles, or nearly three-fifths of the total area of the State.

The Local Government (Areas) Act 1948 repealed the Sydney Corporation Act 1932 which had regulated the operations of the Capital City. It unites the City of Sydney and certain areas, constituting the united area as a city; unites certain other areas or areas and parts of areas, constituting them as municipalities; and reconstitutes the Sydney County Council. All local government authorities in the State are now subject to the general provisions of the Local Government Act.

Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g., electricity, water, sewerage. There were 16 county councils and the Grafton and South Grafton Water Board at 31st December, 1946.

The area, population, dwellings and value of ratable property in the incorporated areas for the year ended 31st December, 1946 are shown in the table below. The valuations relate to ratable property only and exclude Government and other non-ratable property, whose value is not inconsiderable in the aggregate. In this table, and in the corresponding tables for other States, particulars of dwellings are in accordance with the definition used in the 1947 Census, and are the results of information collected on the Census schedules. Occupied dwellings include individual private houses, flats and tenements, and dwellings other than private (boarding houses, hotels, caretakers' quarters, hospitals, educational establishments, etc.). Also included are portions of shared private houses in respect of which portions separate householders' schedules were furnished. Unoccupied dwellings include "week-end" and holiday dwellings and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

LOCAL GOVERNMENT AUTHORITIES, NEW SOUTH WALES : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1946.

Local Bodies.	Number.	Area.	Population. (a)	Dwellings.(a)		Value of Ratable Property.		
				Occupied.	Unoccupied.	Unimproved Capital Value.	Improved Capital Value.	Assessed Annual Value. (b)
		'000 acres.	'000	No.	No.	£'000.	£'000.	£'000.
Metropolitan—								
Capital City	1	3	96	21,863	429	51,788	182,683	9,221
Other(c)	48	151	1,375	355,049	2,339	109,804	371,665	29,950
Total	49	154	1,471	376,912	2,768	161,592	554,348	39,171
Outside Metropolitan Area (d)	240	117,622	1,492	367,370	14,387	189,413	(e)	(e)
Grand Total	289	117,776	2,963	744,282	17,155	351,005	(e)	(e)

(a) As at Census, 30th June, 1917.

(b) Nine-tenths annual rental value of land with improvements thereon. (c) Excludes whole of municipality of Holroyd. (d) Includes City of Greater Newcastle. (e) Not available. (f) Includes 42,253 shares of private houses—see above.

(ii) *Victoria.* Local Government is established throughout the State, the various divisions being termed cities, towns, boroughs, or shires. The only unincorporated areas are French Island in Westernport Bay (42,000 acres), Julia Percy Island, off Port Fairy (650 acres), and Tower Hill, adjacent to the Borough of Kororoit (1,350 acres). Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, but are now subject to several provisions of the Local Government Act. The law relating to local government was consolidated by the Local Government Act 1946.

As from 1st January, 1947, the metropolitan area for statistical and health purposes was redefined by the inclusion of the city of Nunawading, the borough of Ringwood, the Broadmeadows and Campbellfield ridings of the shire of Broadmeadows, the Doutta Galla riding of the shire of Keilor and the shire of Mulgrave.

The area, population, dwellings and estimated value of ratable property in the incorporated areas for the year ended 30th September, 1947 are shown below :—

LOCAL GOVERNMENT AUTHORITIES, VICTORIA : AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1946-47.

Local Bodies.	Number.	Area.	Population. (a)	Dwellings.(a)		Value of Ratable Property.	
				Occupied.	Unoccupied.	Improved Capital Value.	Annual Value.
		'000 Acres.	'000	No.	No.	£'000.	£'000.
Metropolitan—							
Capital City	1	8	100	24,805	206	104,952	5,248
Other (b)	33	341	1,134	296,793	1,630	359,958	18,952
Total	34	349	1,234	321,598	1,836	464,910	24,200
Outside Metropolitan Area	163	55,853	817	208,947	9,572	319,574	16,011
Grand Total	197	56,202	2,051	530,545	11,408	784,484	40,211

(a) As at Census, 30th June, 1947.

(b) Includes the whole of the city of Heidelberg, the borough of Ringwood, and the whole of the shires of Braybrook, Broadmeadows and Keilor. (c) Includes 36,782 shares of private houses—see par. 1 (i) above.

Particulars of the unimproved capital value are not available.

(iii) *Queensland.* The whole of the State (except certain islands along the coast, the Dawson Valley Irrigation Area and the Somerset Dam Area) is incorporated into cities, towns and shires under the Local Authorities Act 1902 and its amendments. The following table shows particulars of the area, population, dwellings and value of ratable property in the incorporated areas for the year ended 30th June, 1947:—

LOCAL GOVERNMENT AUTHORITIES, QUEENSLAND: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1946-47.

Local Bodies.	Number.	Area.	Population. (a)	Dwellings.(a)		Un-improved Capital Value of Ratable Property.
				Occupied.	Un-occupied.	
		'000 acres.	'000.	No.	No.	£'000.
Capital City (b) ..	1	246	402	100,180	1,475	21,177
Outside Metropolitan Area ..	143	428,874	697	171,789	8,071	54,076
Total ..	144	429,120	1,099	(c) 271,969	9,546	75,253

(a) As at Census, 30th June, 1947.
shares of private houses—see par. 1 (i) above.

(b) City of Greater Brisbane.

(c) Includes 10,749

Particulars of improved capital value and annual value are not available.

(iv) *South Australia.* The settled portion of South Australia is incorporated, being mostly under municipal corporations in the larger cities and towns, and district councils in the agricultural areas.

The following table shows the area, population, dwellings and value of ratable property in incorporated areas for the year ended 30th June, 1947.

LOCAL GOVERNMENT AUTHORITIES, SOUTH AUSTRALIA: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1946-47.

Local Bodies.	Number.	Area.	Population. (a)	Dwellings.(a)		Value of Ratable Property.		
				Occu- pied.	Unocu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000 Acres.	'000.	No.	No.	£'000.	£'000.	£'000.
Metropolitan— Capital City ..	1	4	35	8,195	68	12,000	30,000	1,506
Other ..	20	99	348	92,383	696	(b)	90,000	4,380
Total ..	21	103	383	100,578	764	(b)	120,000	5,886
Out-side Metropolitan Area ..	122	34,402	253	66,372	2,689	(b)	96,000	4,768
Grand Total ..	143	34,505	636	166,950	3,453	(b)	216,000	10,654

(a) As at Census, 30th June, 1947.
houses—see par. 1 (i) above.

(b) Not available.

(c) Includes 15,324 shares of private

(v) *Western Australia.* In this State, Local Government is carried on by means of municipalities and district road boards. Certain functions are delegated to health boards, whose personnel, in most cases, coincides with those of the municipalities and district road boards. The following table shows particulars of the area, population, dwellings and value of ratable property in incorporated areas for the year ended October, 1947 for municipalities, and the year ended June, 1947 for district road boards.

LOCAL GOVERNMENT AUTHORITIES, WESTERN AUSTRALIA: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1946-47.

Local Bodies.	Number.	Area.	Popu- lation, (a)	Dwellings.(a)		Value of Ratable Property.		
				Occu- pied.	Unocu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000 Acres.	'000.	No.	No.	£'000.	£'000.	£'000.
Municipalities—								
Metropolitan—								
Capital City	1	14	99	23,633	115	(b)	41,500	1,664
Other	8	11	71	18,004	115	(b)	14,659	750
Total	9	25	170	41,637	230	(b)	56,159	2,414
Outside Metropolitan Area	12	35	52	12,469	222	(b)	8,858	540
Total	21	60	222	54,106	452	(b)	65,017	2,954
District Road Boards—								
Other Metropolitan (c)	11	96	103	25,306	219	3,922	(b)	15
Outside Metropolitan Area	116	624,432	175	45,605	1,866	18,777	(b)	511
Total	127	624,528	278	70,911	2,085	22,699	(b)	526
All Authorities—								
Metropolitan—								
Capital City	1	14	99	23,633	115	(b)	41,500	1,664
Other	19	107	174	43,310	334	(b)	(b)	765
Total	20	121	273	66,943	449	(b)	(b)	2,429
Outside Metropolitan Area	128	624,467	227	58,074	2,088	(b)	(b)	1,051
Grand Total	148	624,588	500	125,017	2,537	(b)	(b)	3,480

(a) As at Census, 30th June, 1947. (b) Not available. (c) Includes part only (8,064 acres) of Swan River District situated in Metropolitan Area. (d) Includes 6,455 shares of private houses—see par. 1 (i) above.

The method of valuation is not identical in the case of all district road boards, as in some the assessment is based on the unimproved capital value and in others partly on the unimproved capital value and partly on the annual value. The amounts shown are the totals for the areas rated on each valuation, and are not a function of each other.

(vi) *Tasmania.* The whole State is divided into municipal districts, Hobart and Launceston being incorporated under separate Acts. The Hobart Corporation Act was consolidated in 1947. The following table shows particulars of the area, population, dwellings and value of ratable property in incorporated areas for the year ended June, 1947.

LOCAL GOVERNMENT AUTHORITIES, TASMANIA: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1946-47.

Local Bodies.	Number.	Area.	Population. (a)	Dwellings.(a)		Value of Ratable Property.		
				Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000 Acres.	'000.	No.	No.	£'000.	£'000.	£'000.
Metropolitan—								
Capital City ..	1	18	57	13,662	56	5,208	15,777	994
Other (b) ..	2	99	19	4,571	331	1,162	3,560	259
Total ..	3	117	76	18,233	387	6,370	19,337	1,253
Outside Area ..								
Metropolitan ..	46	16,661	180	44,376	1,964	17,488	41,709	2,314
Grand Total ..	49	16,778	256	62,609	2,351	23,858	61,046	3,567

(a) As at Census, 30th June, 1947.

(b) Comprises the whole of the Municipalities of Clarence and Glenorchy.

(c) Includes 4,911 shares of private houses—see par. 1 (i) above.

2. **Finances.**—(i) *General.* As the result of resolutions adopted at a conference of Statisticians in 1936 the financial statistics of Local Government Authorities were compiled in the various States on a more comparable basis than formerly. The collection of this information was suspended in most States for the duration of the war, but has now been resumed. The tables following show the latest figures available, which, except for the State of New South Wales where the figures relate to the year 1946, refer to the year 1946-47.

(ii) *Ordinary Services.* (a) *Details.* In the returns of revenue and expenditure for 1946-47 in the following table the proceeds from loans and expenditure thereof have been excluded, as have the operations of business undertakings controlled by the various Local Government Authorities. The profits resulting from the working of these undertakings, where taken into general revenue, have been included.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE, 1946-47.

Particulars.	N.S.W. (a)	Vic. (b)	Q'land. (c)	S. Aust. (c)	W. Aust. (d)	Tas. (c)	Total.
Number of Local Government Authorities ..	289	197	144	143	148	49	970
REVENUE (EXCLUDING LOAN RECEIPTS).							
(£.)							
Taxation—							
Rates (net)	6,742,581	4,580,888	3,125,976	1,135,537	811,928	460,287	16,939,422
Penalties	56,490	25,456					
Licences	142,087	58,533					
Total	6,941,158	4,664,897	3,162,378	1,162,904	832,892	470,021	17,234,250
Public Works and Services—							
Sanitary and Garbage							
Services	670,426	214,097	619,063	36,866	116,803	28,281	1,685,536
Council Properties ..	763,605	766,087	490,366	135,294	117,367	72,748	2,345,467
Street Construction ..	214,682	142,092	41,879	27,661	30,159	694	457,167
Other	379,497	106,151	26,549	36,149	24,996	13,084	586,426
Total	2,028,210	1,228,427	1,177,857	235,970	289,325	114,807	5,074,596
Government Grants—							
Unemployment Relief ..				6,826			6,826
Roads	1,146,556	95,847	534,383	353,204	54,513	19,319	2,202,822
Other	446,281	184,228	(f) 293,688	12,425	8,923	13,912	959,457
Total	1,592,837	280,075	828,071	371,455	63,436	33,231	3,169,105
Profits from Business Undertakings		211,492	25,711		91,770		328,973
Fees and Fines		18,358	286,860	26,248	357,217	62,490	948,587
All Other		73,015		38,749	85,650		
Total, Revenue	10,562,205	6,476,264	5,480,877	1,835,326	1,720,290	680,549	26,755,511

EXPENDITURE (EXCLUDING LOAN EXPENDITURE). (£.)

General Administration ..	827,247	926,656	418,891	196,443	188,396	86,687	2,644,320
Debt Services (excluding Business Undertakings)—							
Interest	614,042	348,421	560,977	25,014	52,938	18,663	1,626,055
Redemption	958,010	480,648	571,077	60,944	123,948	35,744	2,236,371
Exchange	25,923		92,674		2,277	505	121,369
Other	2,419	6,776	8,312	121	556		18,184
Total	1,600,384	841,845	1,239,040	86,079	179,719	54,912	4,001,979
Public Works and Services—							
Roads, Streets and Bridges	4,632,759	2,410,274	2,245,295	1,168,907	629,481	285,945	11,381,661
Health Administration ..	224,462	273,146	111,346	90,813	53,106	21,118	782,991
Sanitary and Garbage							
Services	976,854	451,145	465,493	112,000	162,689	33,284	2,201,465
Street Lighting	391,912	182,125	91,833	66,649	55,051	27,707	815,877
Council Properties ..	1,545,568	1,334,079	582,098	205,116	394,690	106,022	4,168,473
Other	290,497	61,960	(g) 475,064	71,369	46,593	13,982	959,465
Total	8,062,052	4,722,629	3,971,129	1,723,854	1,342,210	488,058	20,309,932
Grants—							
Fire Brigades	172,181	116,127	59,937	(h)	25,944		
Hospitals and Ambulances	56,770	63,891	24,226	(h)	3,966		
Other Charities			872	4,259	3,765	14,957	1,088,566
Other	(i) 227,739	281,675	47,415	4,678	1,944		
Total	690	461,693	110,670	8,937	35,619	14,957	1,088,566
All Other	332,082	33,925	99,776	279	86,856	77,460	630,378
Total, Expenditure ..	11,278,455	6,986,748	5,839,506	2,015,592	1,832,800	722,074	28,675,175
less	183,244						183,244
	11,095,211	6,986,748	5,839,506	2,015,592	1,832,800	722,074	28,491,931

(a) Figures for New South Wales relate to the year ended 31st December, 1946, and are on an income and expenditure basis as distinct from those of other States, which are on a cash basis. (b) Year ended 30th September, 1947. (c) Year ended 30th June, 1947. (d) Municipalities—Year ended 31st October, 1947; Road Districts—Year ended 30th June, 1947. (e) Includes £20,463 reimbursements from Highways Department for work done. (f) Includes £141,860 for sewerage and drainage. (g) Includes £179,105 for sewerage, mosquito control and drainage. (h) Compulsory contributions included under Public Works and Services. (i) To Main Roads Department. (j) Includes £132,560 to Country Roads Board. (k) This deduction offsets duplications caused by the inclusion above of particulars of expenditure on (i) the purchase from revenue of assets and the depreciation of those assets, and (ii) the depreciation of assets purchased from loans and the repayment of those loans. The amount deducted cannot be apportioned according to the various headings.

(b) Years 1938-39 and 1942-43 to 1946-47. The following table shows the revenue and expenditure (excluding loan) of local government authority ordinary services for the years 1938-39 and 1942-43 to 1946-47.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE.

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
1938-39 ..	10,657,409	6,070,551	4,177,632	1,578,688	1,447,154	518,755	24,450,189
1942-43 ..	(e)	5,641,982	(e)	1,403,364	(f)1,382,105	530,876	(e)
1943-44 ..	(e)	5,566,219	(e)	1,368,639	(f)1,400,380	529,886	(e)
1944-45 ..	9,015,895	5,668,618	4,577,539	1,408,048	(f)1,368,044	551,634	22,529,778
1945-46 ..	9,256,534	5,904,597	4,874,703	1,554,280	1,441,370	507,943	23,629,429
1946-47 ..	10,562,205	6,476,264	5,480,877	1,835,326	1,720,290	680,549	26,755,511
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
1938-39 ..	10,790,273	6,192,859	4,334,634	1,558,169	1,489,079	506,976	24,871,990
1942-43 ..	(e)	4,984,390	(e)	1,222,129	(f)1,237,193	514,291	(e)
1943-44 ..	(e)	5,106,856	(e)	1,283,542	(f)1,311,488	529,531	(e)
1944-45 ..	8,956,007	5,344,471	4,564,402	1,385,934	(f)1,346,459	534,915	22,132,188
1945-46 ..	9,260,781	6,218,046	5,267,540	1,632,714	1,594,060	622,311	24,595,461
1946-47 ..	11,095,211	6,986,748	5,839,506	2,015,592	1,832,800	722,074	28,491,931

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June. (e) Not available. (f) Includes loan receipts and expenditure of Local Boards of Health.

(iii) *Business Undertakings.* (a) *Details.* The table hereunder shows, for 1946-47, particulars of the revenue and expenditure, other than loan, of business undertakings under the control of local government authorities. These particulars are not included in the foregoing tables.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE, 1946-47.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
Water Supply and Sewerage—							
Rates	592,667	(a)	14,184	..	5,752	174,539	(a)
Charges for Services and							
Sales of Products ..	201,518	(a)	1,366,391	690	7,236	51,409	(a)
Other (including Grants) ..	205,967	(a)	111,378	..	1,343	29,351	(a)
Total	1,000,152	48,887	1,491,953	690	14,331	255,299	2,811,312
Electricity and Gas—							
Rates	34,586	(a)	8,076	..	..	..	(a)
Charges for Services and							
Sales of Products ..	8,696,520	(a)	1,289,956	174,558	1,333,975	14,922	(a)
Other (including Grants) ..	76,424	(a)	71,879	6,618	14,803	2	(a)
Total	8,807,530	2,558,518	1,369,911	181,176	1,348,778	14,924	14,280,837
Railways, Tramways and							
Omnibuses—							
Rates .. ..	..	(a)	..	..	..	7,169	(a)
Charges for Services and							
Sales of Products ..	..	(a)	1,374,517	..	..	322,354	(a)
Other (including Grants) ..	..	(a)	32,771	..	..	4,478	(a)
Total .. ..	..	9,266	1,407,288	..	..	334,001	1,750,555
Other—	(e)	(d)	(e)	(f)	(g)	(h)	
Rates .. ..	..	(a)	..	..	..	72	(a)
Charges for Services and							
Sales of Products ..	515,863	(a)	34,239	12,937	18,749	16,586	(a)
Other (including Grants) ..	4,625	(a)	7,305	1,476	955	715	(a)
Total	520,488	180,704	41,544	14,413	19,704	17,373	794,226
Grand Total	10,328,170	2,797,375	4,310,606	196,279	1,382,813	621,597	19,636,930

NOTE.—See next page for notes.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—
REVENUE AND EXPENDITURE, 1946-47—*continued*.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
EXPENDITURE (EXCLUDING LOAN EXPENDITURE).							
Water Supply and Sewerage—							
Working Expenses ..	481,814	(a)	555,142	690	5,252	93,837	(a)
Depreciation ..	25,457	(a)	..	..	..	..	(a)
Debt Charges ..	396,330	(a)	733,087	..	9,182	137,957	(a)
Other (including Transfers to General Revenue and Construction) ..	..	(a)	156,409	..	..	26,332	(a)
Total	852,687	50,674	1,444,938	690	14,434	257,226	2,620,649
Electricity and Gas—							
Working Expenses ..	6,309,844	(a)	950,274	134,858	1,049,822	14,337	(a)
Depreciation ..	887,304	(a)	..	..	104,601	..	(a)
Debt Charges ..	1,289,957	(a)	229,596	9,987	47,982	39	(a)
Other (including Transfers to General Revenue and Construction) ..	..	(a)	196,653	38,422	91,549	422	(a)
Total	8,487,105	2,478,526	1,376,523	183,267	1,293,954	14,798	13,834,173
Railways, Tramways and Omnibuses—							
Working Expenses ..	..	(a)	1,046,927	..	..	283,347	(a)
Depreciation ..	..	(a)	..	..	..	..	(a)
Debt Charges ..	..	(a)	202,348	..	..	42,858	(a)
Other (including Transfers to General Revenue and Construction) ..	..	(a)	214,891	..	..	17,887	(a)
Total .. ..	..	8,500	1,464,166	..	..	344,092	1,816,756
Other—	(c)	(d)	(e)	(f)	(g)	(h)	
Working Expenses ..	487,602	(a)	38,331	12,368	18,044	13,414	(a)
Depreciation ..	3,461	(a)	..	..	360	..	(a)
Debt Charges ..	22,918	(a)	..	..	856	3,636	(a)
Other (including Transfers to General Revenue and Construction) ..	..	(a)	3,903	2,000	..	1,724	(a)
Total	507,059	196,443	42,234	14,368	19,260	18,774	798,138
Grand Total ..	9,846,851	2,734,143	4,327,861	198,325	1,327,648	634,890	19,069,718

(c) Not available separately.

(b) Includes £144,282 Government Grant for part of cost of new works borne by Government.

(c) Abattoirs and ice works.

(d) Hydraulic power undertaking, quarries and abattoirs.

(e) Municipal market, ice works, amusement parks and accommodation hostel.

(f) Quarries.

(g) Quarries, ice works, cinema and abattoirs.

(h) Abattoirs.

NOTE.—Minus sign (—) indicates an excess of credits.

(b) Years 1938-39 and 1942-43 to 1946-47. This table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1938-39 and 1942-43 to 1946-47.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE.

(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(e)	Total.
REVENUE (EXCLUDING LOAN RECEIPTS).							
1938-39 ..	6,405,010	1,813,796	3,373,966	113,132	962,470	528,461	13,196,835
1942-43 ..	(e)	2,420,520	(e)	145,352	1,006,726	659,157	(e)
1943-44 ..	(e)	2,510,079	(e)	153,072	1,079,175	682,766	(e)
1944-45 ..	9,323,148	2,674,803	4,805,321	174,422	1,137,903	595,984	18,771,581
1945-46 ..	9,583,012	2,691,167	4,725,507	182,867	1,259,405	603,329	19,045,287
1946-47 ..	10,328,170	2,797,375	4,310,696	196,279	1,382,813	621,597	19,636,930

EXPENDITURE (EXCLUDING LOAN EXPENDITURE).

1938-39 ..	5,556,123	1,802,972	3,256,263	123,356	935,052	513,666	12,187,432
1942-43 ..	(e)	2,339,587	(e)	130,398	970,982	628,917	(e)
1943-44 ..	(e)	2,429,326	(e)	146,579	1,031,757	655,381	(e)
1944-45 ..	8,805,878	2,515,912	4,383,756	154,161	1,076,958	574,770	17,511,435
1945-46 ..	9,068,181	2,668,730	4,723,246	162,937	1,177,146	593,503	18,393,743
1946-47 ..	9,846,851	2,734,143	4,327,861	198,325	1,327,648	634,890	19,069,718

NOTE.—See notes to corresponding table on Ordinary Services.

(iv) *Loan Expenditure.* (a) *Details.* The table below shows particulars for 1946-47 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE ON WORKS, 1946-47.

(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
ORDINARY SERVICES.							
Roads, Bridges, Streets, Footpaths, Drainage and Sewerage	250,525	159,286	733,860	76,932	63,475	84,548	2,274,931
Council Properties ..	233,141	41,689	69,972	27,958	8,711		
Parks, Gardens and Recreational Reserves ..	21,679	12,789		..	5,827		
Other	141,542	72,371		..	46,648		
Total	646,887	226,135	1,027,810	104,890	124,661	84,548	2,274,931

BUSINESS UNDERTAKINGS.

Water Supply	259,152	19,467	369,997	..	..	117,815	2,328,529
Sewerage	16,100	..	195,141	..	..
Electricity and Gas ..	672,140	187,658	213,074	..	23,038		
Railways, Tramways and Omnibuses .. ..	..	..	194,188	..	..
Other	13,613	21,138	1,996	..	(c) 24,012		
Total	961,005	228,263	974,396	..	47,050	117,815	2,328,529
Grand Total	1,607,892	514,398	2,002,206	104,890	171,711	202,363	4,603,460

(a) Includes advances for homes £22,587.
Fund.

(c) Housing schemes.

(b) Excludes £255,340 transferred to General Revenue

(b) *Years 1938-39 and 1942-43 to 1946-47.* The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1938-39 and 1942-43 to 1946-47.

LOCAL GOVERNMENT AUTHORITIES : LOAN EXPENDITURE ON WORKS.
(£.)

Year.	N.S.W.(a)	Victoria.(b)	Q'land.(c)	S. Aust.(c)	W. Aust.(d)	Tas.(c)	Total.
ORDINARY SERVICES.							
1938-39 ..	1,757,704	662,086	1,316,651	43,479	117,172	39,481	3,937,473
1942-43 ..	(e)	59,384	(e)	2,668	(f) 2,205	1,976	(e)
1943-44 ..	(e)	69,509	(e)	689	(f) 1,494	4,272	(e)
1944-45 ..	93,220	(e)	92,231	10,925	(f) 560	16,727	(e)
1945-46 ..	144,568	114,821	247,023	44,382	25,346	25,111	601,281
1946-47 ..	646,887	286,135	1,027,810	104,890	124,661	84,548	2,274,931
BUSINESS UNDERTAKINGS.							
1938-39 ..	1,481,484	452,374	941,911	9,542	76,280	232,687	3,194,278
1942-43 ..	(e)	132,411	(e)	..	1,500	124,081	(e)
1943-44 ..	(e)	89,417	(e)	..	..	92,811	(e)
1944-45 ..	419,180	(e)	221,659	4,500	..	97,228	(e)
1945-46 ..	425,886	211,365	507,780	..	2,500	43,978	1,191,509
1946-47 ..	961,605	228,263	974,396	..	47,050	117,815	2,328,529

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June. (e) Not available. (f) Excludes Local Boards of Health.

§ 3. Local and Semi-Governmental Authorities' Debt.

1. *General.*—Previous issues of the Official Year Book (*see* No. 36, page 595) have contained particulars of Local and Semi-Governmental Debt up to and including 1940-41. These particulars were compiled from returns collected prior to the 1939-45 War. Because of difficulties created by the war this collection was discontinued after 1940-41, but was resumed in 1946-47. The information in the following table has been compiled from returns furnished by all Local Government Authorities and those Semi-Governmental Authorities listed in the following paragraph.

2. *Semi-Governmental Authorities furnishing Returns.*—The following Semi-Governmental Authorities supplied returns of debt liability for the year ended 30th June, 1947 :—

New South Wales. *Water Supply and Sewerage.*—Metropolitan Water, Sewerage and Drainage Board, Hunter District Water Board, Broken Hill Water Board, and County Councils. *Electricity Supply.*—County Councils. *Fire Brigades.*—Board of Fire Commissioners. *Banking.*—Rural Bank of New South Wales.

Victoria. *Water Supply and Sewerage.*—Melbourne and Metropolitan Board of Works, Ballarat Water Commission, Geelong Water Works and Sewerage Trust, Mildura Urban Water Trust, Waterworks Trusts and Sewerage Authorities. *Irrigation and Drainage.*—First Mildura Irrigation Trust and Trafalgar Meadows Drainage Trust. *Harbours.*—Melbourne Harbour Trust and Geelong Harbour Trust. *Tramways.*—Melbourne and Metropolitan Tramways Board. *Electricity Supply.*—State Electricity Commission. *Fire Brigades.*—Metropolitan Fire Brigades Board and Country Fire Authority. *Marketing, Buying and Selling.*—Western Metropolitan Marketing Trust. *Grain Elevators.*—Grain Elevators Board. *Banking.*—State Savings Bank (Crédit Foncier Department). *Housing.*—Housing Commission of Victoria.

- Queensland.** *Water Supply and Sewerage.*—Coolangatta-Nerang Water Supply Board, Stanley River Works Board, Cairns-Mulgrave Water Supply Board and Bore Water Supply Boards. *Irrigation and Drainage.*—Inkerman Irrigation Board (Water). *Harbours.*—Harbour Boards, Harbour Dues Fund, River Works Board, Brisbane Harbour Loans Fund, Brisbane Graving Dock, Burdekin River Trust Fund. *Electricity Supply.*—Barron Falls Hydro-Electricity Board, Inkerman Irrigation Board (Electricity), Capricornia Regional Electricity Board, Cairns Regional Electricity Board, Wide Bay Regional Electricity Board. *Roads and Bridges.*—Lamington Bridge Board, Main Roads Commission. *Trading Activities.*—State Coal Mines, Chillagoe State Smelters, State Coke Works, Irvinebank State Treatment Works. *Fire Brigades.*—Fire Brigades. *Universities.*—University Works Board. *Hospitals and Ambulances.*—Hospitals and Ambulances. *Marketing, Buying and Selling.*—Queensland Meat Industry Board, Atherton Tableland Maize Board, Northern Pig Board, Queensland Barley Board, Queensland Cotton Board, Queensland Egg Board, Queensland Peanut Board, Queensland Butter Board, Queensland Sugar Board, Queensland Ginger Board, and Fish Supply Fund. *Marketing Agency.*—Queensland Arrowroot Board, Committee of Direction Fruit Marketing, Queensland Broom Millet Board, Queensland Cheese Board, Queensland Honey Board, Queensland Plywood and Veneer Board, Northern Plywood and Veneer Board, State Wheat Board, State Fish Board, Queensland Central Coal Board, West Moreton District Coal Board, Maryborough District Coal Board, Central District Coal Board and Darling Downs District Coal Board. *Industry Improvement.*—Queensland Dairy Products Stabilization Board, Dairy Cattle Improvement Fund, Queensland Cane Growers Council, Council of Agriculture, Stock Diseases Fund, Brands Act Fund, Moreton Rabbit Board, Darling Downs Rabbit Board, Leichhardt Rabbit Board, Toowoomba Pest Destruction Board, Brisbane and East Moreton Pest Destruction Board, Banana Industry Fund, Sugar Cane Prices Fund, Sugar Fund, Buffalo Fly Control Fund and the Stock Routes and Pest Destruction Fund. *Banks.*—Agricultural Bank Fund. *Miscellaneous.*—Aboriginal Welfare Fund and Committee of Reconstruction Training Fund.
- South Australia.** *Irrigation and Drainage.*—Renmark Irrigation Trust. *Tramways.*—Municipal Tramways Trust. *Electricity Supply.*—Electricity Trust of South Australia. *Fire Brigades.*—Fire Brigades Board. *Hospitals and Ambulances.*—Metropolitan Infectious Diseases Board, Adelaide Children's Hospital and Public Hospitals. *Marketing, Agency.*—Dried Fruits Board and Metropolitan and Export Abattoirs Board. *Industry Improvement.*—Vermin Boards. *Banking.*—State Bank. *Housing.*—South Australian Housing Trust. *Miscellaneous.*—Centennial Park Cemetery Trust, Enfield General Cemetery Trust, Institute of Medical and Veterinary Science, and School of Mines and Industries.
- Western Australia.** *Water Supply and Sewerage.*—Water Boards. *Irrigation and Drainage.*—Drainage Boards. *Harbours.*—Fremantle Harbour Trust and Bunbury Harbour Board. *Tramways.*—Western Australian Transport Board and Eastern Goldfield Transport Board. *Fire Brigades.*—Western Australian Fire Brigades Board. *Hospitals and Ambulances.*—Perth Hospital, Children's Hospital. *Marketing.*—Metropolitan Milk Board, Western Australian Alumite Industry, Dried Fruits Board, The Western Australian Barley Marketing Board, State Gardens Board, Western Australian Marketing Board, Dairy Products Marketing Board and Charcoal Iron and Steel Industry. *Housing.*—McNess Housing Trust and State Housing Commission. *Miscellaneous.*—King's Park Board, Karrakatta Cemetery Board, Fremantle Cemetery Board and State Government Insurance Office.
- Tasmania.** *Harbours.*—Marine Boards and Harbour Trusts. *Fire Brigades.*—Hobart Fire Brigade.

3. Local and Semi-Governmental Authorities' Debt, 1946-47.—The following table provides a summary of new money loan raisings, provisions for the redemption of debt, debt outstanding and interest payable, of local and semi-governmental authorities for the year ended 30th June, 1947. For greater detail see *Finance Bulletin* No. 39, 1947-48, published by this Bureau.

LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES: NEW MONEY LOAN
RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE, 1946-47.

(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL GOVERNMENT AUTHORITIES.							
New Money Loan Raisings—							
From Government ..	13	25	192	55	..	..	285
From Public ..	2,810	649	2,215	27	280	270	6,260
Total ..	2,832	674	2,407	82	280	270	6,545
Funds Provided for Redemption—							
Government Loans ..	44	23	356	17	..	..	440
Loans due to Public ..	1,406	638	751	55	172	140	3,162
Total ..	1,450	661	1,107	72	172	140	3,602
Accumulated Sinking Fund Balance ..	5,837	1,230	2,713	1	443	286	10,510
Debt—							
Due to Government ..	699	263	7,644	119	7	144	8,876
Due to Banks (Net Overdraft) ..	51	106	38	48	10	6	259
Due to Public Creditor (a) ..	24,214	10,207	22,260	531	1,681	2,619	61,512
Total (a) ..	24,964	10,576	29,942	698	1,698	2,769	70,647
Maturing Overseas (a)(b) ..	2,117	..	5,315	..	175	200	7,807
Interest Payable (a) ..	(c)	425	1,229	29	73	107	(c)

SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES.

New Money Loan Raisings—							
From Government ..	..	4,216	674	1,851	272	..	7,013
From Public (a) ..	3,000	2,611	1,213	11,092	6	37	17,068
Total ..	3,000	6,827	1,887	12,943	278	37	24,981
Funds Provided for Redemption—							
Government Loans ..	224	77	393	201	47	10	862
Loans due to Public ..	1,493	575	248	1	13	13	2,253
Total ..	1,677	652	551	202	60	23	3,115
Accumulated Sinking Fund Balance ..	6,475	4,692	406	268	362	..	12,203
Debt—							
Due to Government ..	21,099	10,647	12,012	8,871	5,194	151	57,974
Due to Banks (Net Overdraft) ..	233	262	393	19	16	..	923
Due to Public Creditor (a) ..	74,681	50,105	5,381	11,050	247	480	150,844
Total (a) ..	96,013	70,014	17,686	19,940	5,457	631	209,741
Maturing Overseas (a)(b) ..	9,994	5,558	..	1,188	..	..	16,740
Interest Payable (a) ..	(c)	2,514	649	720	231	23	(c)

(a) Includes debt or interest payable in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (b) Included in debt figures above. (c) Not available.

In the table above, debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalized and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more have been included. Current liabilities, such as interest accrued (but not capitalized), trade creditors, amounts held in trust and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government and interest capitalized. Loans raised and redeemed within the year, increases in overdrafts and loans raised for conversion or redemption of existing debt are excluded. Principal repaid excludes principal repaid from sinking funds or the proceeds of any conversion or redemption loan. The amount credited to sinking funds includes amounts contributed from revenue, etc., sources and earnings on sinking fund investments credited to the sinking fund.

§ 4. Roads and Bridges.

1. **Commonwealth Government Grants.**—The following table shows particulars of the amounts paid from Consolidated Revenue Fund by the Commonwealth Government, under the Commonwealth and Federal Aid Roads and Works Acts, to the several States for road construction, maintenance and repair and other works connected with transport during the years 1938–39 and 1943–44 to 1947–48. Particulars of payments for the construction and maintenance of strategic roads and for the promotion of road safety practices made in 1947–48 are excluded. In addition, particulars are shown of the aggregate grants for these purposes for the years 1922–23 to 1947–48, under Commonwealth and Federal Aid Roads and Works, and Main Roads Development, Acts. For further particulars see Chapter XVII.—Public Finance, Payments to or for the States.

ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS BY COMMONWEALTH GOVERNMENT.

(£'000.)

Year ended 30th June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939 (a)	1,199	747	815	474	819	213	4,267
1944 (a)	131	330	360	210	362	94	1,487
1945 (a)	619	385	420	244	423	110	2,201
1946 (a)	935	582	636	369	639	167	3,328
1947 (a)	1,350	841	918	533	923	240	4,805
1948 (b)	2,017	998	1,102	631	1,102	287	6,137
Aggregate years 1922–23 to 1947–48 (c)	17,866	11,327	12,157	7,177	12,294	3,200	64,021

(a) Under Federal Aid Roads and Works Acts. (b) Under Commonwealth Aid Roads and Works Acts, except for £398,830 to New South Wales under Federal Aid Roads and Works Acts, representing amounts not drawn by that State during 1943–44 and 1944–45. (c) Under Commonwealth and Federal Aid Roads and Works, and Main Roads Development, Acts.

In addition to the foregoing amounts, financial assistance from loan fund has been granted by the Commonwealth Government to the States for road construction, although not in recent years. At 30th June, 1949 the aggregate amount was £249,686.

2. New South Wales.—(i) *General.* A central road authority was created by legislation early in 1925 for the purpose of providing improved and uniform standards of construction and maintenance of the principal roads, and to administer Governmental subsidies for work on those roads. This authority (now organized as the Department of Main Roads) exercises control over Governmental activities in connexion with road works, these activities embracing works on main and developmental roads throughout the State, all roads in the unincorporated portion of the Western Division, and proclaimed national works, principally bridges and ferries, constructed from Government funds. The department co-operates with the municipal and shire councils in the work of constructing and maintaining a well-organized system of main highways. Public roads, except those within the City of Sydney, may be proclaimed as main roads upon the recommendation of the Commissioner. The most important classes are :—

State Highways—the principal avenues of communication between the coast and the interior or throughout the State, connecting with such avenues in other States ; *Trunk Roads*—forming with the State highways the framework of the general system of intercommunication throughout the State ; *Ordinary Main Roads*—used principally by through traffic as the means of intercommunication between towns or important centres of population and, with the State highways and trunk roads, forming part of the general system of road communication throughout the State.

In addition, there are :—

Secondary Roads—in the metropolitan area of Sydney, carrying a substantial amount of through traffic and relieving neighbouring main roads of traffic which they would otherwise have to bear ; *Developmental Roads*—serving to develop a district or area of land by improving or providing access to a railway station or a shipping wharf, or to a road leading to a railway station or a shipping wharf.

In the metropolitan district the whole cost of the construction and maintenance of main roads is paid from the funds of the Main Roads Department, while in the country districts assistance in respect of road works may be granted for any area through which a main road passes. The cost of constructing developmental roads and works is borne in full by the Main Roads Department, but local councils are required to maintain them in satisfactory condition. For other roads the cost of both construction and maintenance work is generally chargeable to the revenue of local authorities, although Governmental assistance is not infrequently granted for works of construction and re-construction. In the Western Division the full cost of all roads and bridges is met by the Department of Main Roads.

The length of main and secondary roads maintained by the Department of Main Roads at 30th June, 1948 (excluding the Western Division) was 2,725 miles (16 per cent.), while the length maintained by Councils was 14,625 miles (84 per cent.). The proportions of the several classes of main roads maintained by Department and Councils respectively were :—State highways, 37 per cent., 63 per cent. ; trunk roads, 2 per cent., 98 per cent. ; ordinary main roads, 8 per cent., 92 per cent. ; secondary roads, 75 per cent., 25 per cent. In the County of Cumberland the Department maintained 77 per cent. of the roads (682 miles).

(ii) *Length of Roads.* (a) *Proclaimed Roads.* The following table shows lengths of proclaimed roads at 30th June, 1948, according to class of road :—

PROCLAIMED ROADS, NEW SOUTH WALES : LENGTHS, 30th JUNE, 1948.
(Miles.)

Division.	Main Roads.				Secondary Roads.	Developmental Roads.	Total.
	State Highways.	Trunk Roads.	Ordinary Main Roads.	Total.			
Eastern and Central	5,161	2,388	9,746	17,295	(a) 56	2,801	20,152
Western	1,329	1,353	2,889	5,571	..	..	(b) 5,571
Total	6,490	3,741	12,635	22,866	56	2,801	25,723

(a) Metropolitan area.
Department.

(b) Excludes 2,309 miles of unclassified roads, the responsibility of the

During 1947-48 the following roads were proclaimed or declared :—83 miles of new main roads and extensions of existing main roads, 8 miles of new secondary roads, and 41 miles of new developmental roads.

(b) *Composition of Roads.* In 1946 the total length of all roads in New South Wales was estimated at 124,443 miles, including 7,820 miles in the Western Division. The lengths of roads, according to their composition or nature, were as follows :—cement concrete, 377 miles; asphaltic concrete, 212 miles; tar or bituminous macadam, 3,791 miles; surfaced water-bound macadam, 3,758 miles; water-bound macadam, 2,701 miles; gravel or crushed rock, 30,316 miles; formed only, 26,114 miles; cleared or natural surface only, 57,174 miles.

(iii) *Main Roads Department.* (a) *General.* The Main Roads Department plan for the main road development of the metropolis, and the County of Cumberland generally, has been adapted to, and mainly incorporated in, the Cumberland County Council planning scheme for the development and improvement of the County of Cumberland. Surveys and designs have been advanced, and the acquisition of land is proceeding, in connexion with the planned Newcastle and District Arterial Road System and Wollongong-Port Kembla District Main Roads System.

In addition to its construction and maintenance work on roads, the Main Roads Department is engaged on a scheme for widening metropolitan roads. This class of work had already been commenced by several councils prior to the inception of the Department. At 30th June, 1948 the total lengths of roads widened and reconstructed to widths, in the main, between 80 and 84 feet amounted to about 26 miles.

Important work on bridges during 1947-48 included the replacement of a timber deck by one of reinforced concrete over a length of 1,208 feet on the Pyrmont Bridge, Darling Harbour, Sydney, work being carried out, for the most part, while traffic continued to flow; progress in the construction of a steel and concrete bridge over the Hunter River at Hexham (length 1,253 feet); construction work on piers and abutments in a steel truss bridge with concrete piers and abutments and reinforced concrete deck at Iron Cove, between Balmain and Drummoyne, Sydney (length 1,536 feet); commencement of work on a steel and reinforced concrete bridge, with lifting span, over the Clyde River at Bateman's Bay (length 1,008 feet).

(b) *Receipts and Payments.* The funds of the Department of Main Roads are derived principally from taxation of motor vehicles, contributions by the Commonwealth Government under the Commonwealth and Federal Aid Roads and Works Acts (see Chapter XVII.—Public Finance, for some particulars of the basis and distribution of grants under these Acts and par. 1 of this section, page 665, for particulars of the amounts paid in recent years), contributions by municipal and shire councils, and special (not statutory) assistance by the State Government by way of loan moneys or special grants from revenue funds. Receipts and payments for the four years 1944-45 to 1947-48 compared with the income and expenditure for 1938-39 are shown below.

Commencing with the year 1941-42 a change was made to a receipts and payments system of accounting:—

DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES: RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1944-45.	1945-46.	1946-47.	1947-48.
RECEIPTS.					
Motor Vehicle Taxation, and Registration and Licence Fees (part)	2,018,556	1,845,377	2,024,947	2,081,870	2,260,351
Commonwealth and Federal Aid Roads and Works Acts ..	1,176,039	536,509	873,425	1,310,459	61,851,324
Councils' Contributions ..	250,679	242,021	222,097	244,043	249,674
Loans from State Government ..	302,643	..	300,000	400,000	300,000
Grants and Contributions from State Government and Departments, etc.	13,549	18,691	17,231	10,117	53,095
Commonwealth Funds for Defence and Other Works .. ..	..	633,312	77,337	26,127	38,633
Hire of Plant and Motor Vehicles .. ..	..	161,662	131,389	191,400	269,018
Suspense Accounts .. ..	..	73,636	..	2,694	3,574
Other	54,782	113,192	124,858	132,528	107,570
Total	3,816,248	3,624,400	3,771,284	4,399,238	5,139,239

PAYMENTS.

Roads and Bridges in New South Wales—					
Construction	1,736,898	444,164	561,185	1,082,087	1,402,546
Maintenance	1,519,929	1,609,678	1,811,500	2,222,637	2,483,366
Roads and Bridges outside New South Wales .. ..	..	206,498	— 34,087	— 1,551	2,232
Other Works .. ..	..	783,105	220,414	82,822	14,708
Debt Charges—					
Interest, Exchange, etc. ..	152,469	163,656	152,129	161,794	138,124
Sinking Fund and Repayments	200,591	101,940	97,495	99,967	(c) 776,444
Repairs and Expenses, Plant and Motor Vehicles .. ..	..	137,520	124,819	138,538	122,077
Purchase of Assets .. ..	..	100,555	292,078	268,581	148,059
Suspense Accounts .. ..	..	..	67,822	..	108,359
Administration, etc.	100,583	119,241	138,199	170,990	185,179
Other	914	16,573	45,689	37,177	38,670
Total	3,711,384	3,682,930	3,477,243	4,263,042	5,419,764

(a) Income and expenditure.

(b) Includes £398,830 not drawn by State during 1943-44 and 1944-45.

(c) Includes £696,096 to liquidate certain outstanding liabilities before due dates.

The figures shown above represent the aggregate receipts and payments of three funds—the County of Cumberland Main Roads Fund, the Country Main Roads Fund and the Developmental Roads Fund. From 1st January, 1925 to 30th June, 1948 receipts amounted to £80,869,204 and payments to £84,412,148. Particulars of the individual funds are—County of Cumberland, receipts £24,151,280, payments £22,878,875; Country, £59,233,646, £58,220,597; Developmental, £3,484,278, £3,312,676.

The total expenditure on roads streets and bridges in the State by all authorities during the years 1938-39 and 1944-45 to 1947-48 was, respectively, £8,894,000, £4,606,000 £5,252,000, £7,201,000 and £8,934,000. These figures are approximate and they include expenditure on construction, maintenance and direct administration, but not on debt charges. Expenditure on the Sydney Harbour Bridge is not included.

(c) *Sydney Harbour Bridge.* The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and the clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway, two railway tracks and two tramway tracks, and there is also a footway on each side. The capital cost of the bridge to the 30th June, 1948 was £9,746,388, but this amount will be reduced by approximately £138,000 upon the disposal of all surplus resumed property. The portion met from repayable loan funds, over £8,000,000, is to be repaid over a period of 53 years, ending approximately in 1985. The accumulated balance of the Bridge Account to 30th June, 1948 showed a deficiency of £409,843. The following table shows income and expenditure for the years 1938-39 and 1944-45 to 1947-48 :—

SYDNEY HARBOUR BRIDGE, NEW SOUTH WALES : INCOME AND EXPENDITURE.

(£.)

Item.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
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INCOME.

Road Tolls	278,297	150,370	225,554	321,496	352,488
Railway Passenger Tolls	103,697	119,253	134,005	130,501	130,400
Tram and Omnibus Passenger Tolls	38,738	25,401	25,547	20,007	20,380
Other	8,366	7,518	8,621	9,224	9,801
Total	429,098	302,542	393,727	487,888	519,129

EXPENDITURE.

Maintenance and Improvement	36,739	24,889	32,013	52,936	56,139
Interest, Exchange, etc.	334,797	315,300	309,286	303,381	288,357
Sinking Fund	40,564	65,465	66,608	65,531	66,272
Other	12,194	14,222	13,300	15,939	23,064
Total	424,294	419,876	421,207	437,787	433,832

During 1947-48, 23,548,000 rail travellers, 23,834,000 tram and omnibus travellers, and 15,218,000 road travellers in 8,741,000 road vehicles crossed the bridge, contributing, respectively, 26 per cent., 5 per cent., and 69 per cent. of the total toll revenue.

3. *Victoria.*—(i) *General.* With the object of improving the main roads of the State the Country Roads Board was established by legislation passed in 1912. The principal duties of the board are to determine the main roads, State highways, tourists' roads, etc., to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance, and to recommend deviations in existing roads or the construction of new roads in order to facilitate communication or to improve the conditions of traffic.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Victoria at 30th June, 1948 was 14,295 miles (an increase of 1,180 miles over the previous year's total), classified as follows:—State highways, 3,646 miles; main roads, 9,006 miles; tourists' roads, 402 miles; forest roads, 241 miles. The total length of the surface treated (black) system included in the foregoing totals was 6,055 miles or 42.3 per cent.

(b) *Composition of Roads.* It is estimated that, in addition to the 14,295 miles of classified roads as above, there were about 50,000 miles of more important unclassified roads. The latest detailed estimate of the length of roads and streets in Victoria (as at 30th September, 1948) provides the following information:—Wood or stone, 62 miles; portland cement concrete, 150 miles; asphaltic concrete and sheet asphalt, 202 miles; tar or bitumen surface seal, 10,241 miles; water-bound macadam, gravel, sand and hard loam pavements, 28,418 miles; formed only, 23,901 miles; surveyed only, 38,437 miles; total 101,411 miles.

(iii) *Country Roads Board.* (a) *General.* During 1946-47 and 1947-48, respectively, 660 miles and 927 miles of work were carried out on roads under the Board's control. In addition, 43 miles (each year) were treated for municipalities, and 25 miles of bituminous surfacing were laid for the Commonwealth in 1946-47. The total mileages of work carried out were 728 miles in 1946-47 and 970 in 1947-48. Of the work on the roads under the Board's control, 200 miles related to State highways in 1946-47 and 259 miles in 1947-48.

Major bridge work carried out during 1947-48 included the construction and driving of concrete piles for the Swan-street Bridge, Melbourne, over the River Yarra. The proposed bridge will cross the river at a 45° angle. It will be a reinforced concrete "T" beam type structure of five main spans, the three centre spans being 90 feet each in length and the two end spans 69 feet each, a total of 408 feet between abutments. The roadway will be 40 feet in width together with two footways each 8 feet wide. The Country Roads Board is the constructing authority.

(b) *Receipts and Payments.* Funds created under the Act were the Country Roads Board Fund, the Loan Account and the Developmental Roads Loan Account. Particulars of the operations of these funds, together with those of the Commonwealth and Federal Aid Roads and Works Account, are given hereunder:—

Country Roads Board Fund. All fees (other than fees for licences to drive motor cars) and fines under the Motor Car Act, and all registration fees and fines for traction engines, less cost of collection of such fees and fines, are credited to this fund. Particulars of receipts and payments connected with the Commonwealth and Federal Aid Roads and Works Acts, Commonwealth Defence Works and several other funds are not included therein (see next page for particulars). Receipts and payments for the years 1938-39 and 1944-45 to 1947-48 were as follows:—

COUNTRY ROADS BOARD FUND, VICTORIA : RECEIPTS AND PAYMENTS.

(£.)

	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
RECEIPTS.					
Motor Vehicle Registration Fees ..	1,690,962	1,395,225	1,558,480	1,762,796	1,963,555
Municipalities' Payments ..	318,878	241,764	264,506	276,477	302,905
Stores and Materials ..	233,104	254,451	214,569	411,750	598,080
Hire of Plant ..	53,724	108,647	98,782	181,936	230,982
Other ..	117,341	125,636	173,227	206,004	241,210
Total ..	2,414,009	2,125,723	2,309,564	2,838,963	3,336,732

COUNTRY ROADS BOARD FUND, VICTORIA: RECEIPTS AND
PAYMENTS—*continued*.

(£.)

Item.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
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PAYMENTS.

Maintenance of Roads and Murray River Bridges and Punts ..	1,205,066	737,812	836,707	1,416,659	1,770,918
Relief to Municipalities ..	240,170	221,040	221,040	220,704	220,682
Interest, Sinking Fund, etc.— Recoup to Consolidated Revenue—					
Interest, etc.	282,484	315,790	311,769	294,471	296,076
Sinking Fund	25,794	25,567	25,424	25,091	25,262
Municipalities' Repayments, etc. ..	119,167	107,975	106,413	105,546	104,295
Plant, Stores and Materials ..	310,332	314,686	479,371	817,797	1,043,506
Other (including Administration)	230,125	183,979	318,365	369,930	520,811
Total	2,413,141	1,906,849	2,299,089	3,250,198	3,981,550

Country Roads Board Loan Account Loans have been authorized from time to time under the Country Roads Acts for permanent works on main roads and State highways. During the years ended 30th June, 1947 and 1948, respectively, receipts amounted to £10,007 and £15,120, and payments to £9,979 and £15,178. The total expenditure to 30th June, 1948 was £5,072,283.

Developmental Roads Loan Account. This fund was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan moneys raised were exhausted at 30th June, 1937, the total expenditure at that date being £6,425,758.

Commonwealth and Federal Aid Roads and Works Account. Revenue and expenditure in respect of the Commonwealth and Federal Aid Roads and Works Account, particulars of which are not included above, were as follows:—

(£.)

Item.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
Revenue	716,019	370,789	548,931	813,024	993,144
Expenditure (a)	767,767	235,419	234,386	554,682	1,338,301

(a) Excludes the following amounts spent on maintenance and repairs of public roads adjoining, or of approach to, Commonwealth properties in Victoria:—1938-39—£13,321; 1944-45—£3,508; 1945-46—£381; 1946-47—£4,888; 1947-48—£3,407.

Total Expenditure. The total expenditure by the Board on road construction and maintenance during each of the five years 1938-39 and 1944-45 to 1947-48 was as follows :—

COUNTRY ROADS BOARD : EXPENDITURE ON ROADS.

(£.)

Item.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
State Highways—Maintenance, etc. (a)	453,708	251,048	261,956	597,180	1,181,382
Main Roads—Construction(a) ..	224,290	43,794	40,948	95,168	58,710
Maintenance(a) ..	802,920	490,706	550,170	905,344	1,300,652
Developmental Roads—Construction, etc. (a)	468,122	153,081	148,588	252,946	436,467
Tourists' Roads—Construction, etc. (a)	77,694	30,487	53,786	96,302	98,662
Forest Roads—Maintenance ..	..	..	8,021	19,770	29,342
Murray River Bridges and Punts—Maintenance	4,067	4,115	7,623	4,630	4,004
Roads adjoining Commonwealth Areas—Maintenance, etc. ..	13,321	3,598	381	4,888	3,407
Unemployment Relief Works ..	54,662	..	..	..	..
Other Permanent Works .. ..	..	..	..	9,979	15,178
Commonwealth Defence Works—Northern Territory—Construction, etc. .. .. .	..	751,342	6,758	..	..
Allied Works Council .. .. .	..	Cr. 25,962	Cr. 14,072	..	..
Total	2,098,784	1,702,209	1,064,159	1,986,207	3,127,804

(a) Includes amounts contributed by the Commonwealth Government under the provisions of the Commonwealth and Federal Aid Roads and Works Acts.

4. *Queensland.*—(i) *General.* Under the Main Roads Act 1920 a Main Roads Board was constituted, consisting of three members appointed by the Governor-in-Council. In 1925 the Board was abolished and its powers conferred upon a single Commissioner. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main, developmental, secondary, mining access, farmers' and tourist roads and tourist tracks, and the responsibility for building and maintaining these declared roads is largely that of the Commission. Roads of purely local importance are constructed and maintained by local authorities. In many cases construction is subsidized by the State Government by means of Treasury loans. Other roads are built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of declared roads in Queensland at 30th June, 1948 was 19,737 miles, comprising State highways, 7,262 miles; main roads, 10,605 miles; developmental roads, 245 miles; secondary roads, 538 miles; mining access roads, 673 miles; farmers' roads, 156 miles; tourist roads, 256 miles; tourist tracks, 2 miles. During 1947-48, 659 miles were added to the list. The length of roads improved in Queensland from the date of commencement of work under the Main Roads Acts 1920-1943 to 30th June, 1948 was 8,892 miles (45 per cent.). At that date, also, 551 miles of new road construction and 306 miles of stage construction work were proceeding.

(b) *Composition of Roads.* The total length of roads and streets in Queensland at 30th June, 1948 was :—Concrete, 86 miles; bitumen, 3,876 miles; macadam, 8,157 miles; other formed, 44,602 miles; unconstructed, 78,803 miles; total, 135,524 miles.

(iii) *Main Roads Commission.* (a) *General.* During 1947-48 (1946-47 in parenthesis) the Commission completed 570 miles (474 miles) of roads including new construction and stage construction. Bridges of all types to a length of 2,909 (3,706) lineal feet were constructed during 1947-48 (1946-47), bringing the total constructed by the Commission at 30th June, 1948 to 144,422 feet, approximately 27 miles. In addition, at 30th June, 1948, 5,177 feet were under construction. These figures exclude particulars of the Fitzroy River and Burdekin River bridges—special projects.

The first of these is a joint operation being carried out by the Main Roads Commission and the Rockhampton City Council. The design provides for a bridge 1,210 feet long, comprising seven spans varying in length from 143 feet to 198 feet. There will be 42 feet between kerbs for vehicles, with two 5-foot clear footways. The total estimated cost of this structure, including approaches, is approximately £426,000, one-half being financed under the terms of the Main Roads Act. The bulk of the work completed to 30th June, 1948 has been on pier foundations and approaches. The second of these, over the Burdekin River, will be a combined road and rail bridge, estimated to cost about £1,900,000. This work, the largest single post-war project actually under construction in Queensland, had been advanced to a stage at 30th June, 1948, where two of the nine caissons designed for the river bed had been sunk to foundation level. The overall length of the bridge including approaches will be 3,620 feet, and there will be ten spans across the river.

(b) *Receipts and Payments.* The funds of the Main Roads Commission are obtained chiefly from motor vehicle registration and collections, fees, etc., under the Transport Acts, contributions under the Commonwealth and Federal Aid Roads and Works Acts, and loans, grants and advances from the State Government. The total receipts and payments, including amounts for defence works, during each of the years 1938-39 and 1944-45 to 1947-48 are shown below:—

MAIN ROADS COMMISSION, QUEENSLAND: RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
RECEIPTS.					
Motor Vehicle Registration, Transport Acts Collections, Fees, etc.	938,227	847,479	976,800	915,192	967,817
Loans from State Government ..	392,225	220,000	300,000	321,250	300,000
Grants, Advances, Refunds, etc. from State Government ..	579,775	648,755	518,730	230,231	590,708
Commonwealth and Federal Aid Roads and Works Acts ..	806,218	402,229	596,564	893,622	1,088,756
Commonwealth and Allied Defence Works and Services ..	..	2,418,722	464,892	-29,051	..
Maintenance Repayments—Local Authorities ..	98,154	103,660	138,133	167,229	189,010
Hire, Rent, Sales of Plant, etc. ..	288,330	80,324	44,500	65,823	58,109
Other ..		67,790	119,244	82,452	114,317
Total ..	3,102,929	4,797,959	3,159,043	2,646,748	3,308,777

PAYMENTS.

Permanent Road Works and Surveys ..	2,045,900	602,107	668,484	1,635,542	1,972,304
Maintenance of Roads ..	331,734	643,411	639,612	930,158	1,066,543
Port Development Works ..	..	158,799	46,910	15,096	4,885
Plant, Machinery, Buildings, etc. (including Plant Maintenance)	73,632	114,330	341,438	381,061	509,203
Loan—Interest ..	38,861	162,519	180,713	171,407	178,518
Redemption ..	78,153	127,172	133,640	148,413	165,553
Payments to State Consolidated Revenue ..	340,244	93,637	107,837	39,810	..
Payments to Local Authorities ..	27,418	29,709	32,782	41,541	..
Commonwealth and Allied Defence Works and Services ..	..	2,378,099	721,174	17,039	-16,943
Other Works and Services ..	..	3,746	61,750	14,404	654
Administration, etc. ..	149,950	177,906	211,893	303,990	342,768
Other ..	1,750	37,063	28,347	14,528	19,560
Total ..	3,087,642	4,528,493	3,174,580	3,718,989	4,243,045

5. **South Australia.**—(i) *General.* The Highways Act 1926-1944 created a Commissioner of Highways and provided for a Highways Fund. The Commissioner is virtually empowered to determine upon which main roads he will spend the moneys available; in doing which he has to take into account the availability of funds for main roads, the service the road is intended to render, and the present or future adequacy of railway facilities in the area through which it passes.

The Highways Fund is credited with the receipts from State motor taxation, fees, fines and licences, after deduction of the costs of collection, and all loans raised and appropriated for roads. All moneys received by the State from the Commonwealth under the Commonwealth and Federal Aid Roads and Works Acts are also expended by the Commissioner of Highways under the general provisions of the Highways Act.

(ii) *Length of Roads.* The total length of roads in use for general traffic at 30th June, 1948, was as follows:—Within District Council and Corporation Boundaries.—Blocks (wood or stone), 8 miles; bituminous concrete (asphalt and premix), 393 miles; cement concrete and cement penetration, 2 miles; penetration or surface dressed (bitumen or tar), 4,283 miles; metalled (gravelled or rubbled), 13,429 miles; formed, but little or no metal, 8,742 miles; surveyed, used by traffic, but little or no improvement, 25,220 miles; total, 52,077 miles: Outside Districts (main roads only), 565 miles: Grand total, 52,642 miles. Lengths of main roads within district council and corporation boundaries aggregated 7,556 miles.

(iii) *State Highways and Local Government Department.* (a) *General.* A programme of road works proposed to be carried out during the period of five years after the cessation of hostilities provides for the reconstruction of approximately 2,850 miles of main roads throughout the State at an estimated cost of more than £3,000,000, the greater proportion to be provided from motor vehicle taxation. The programme includes (i) the realignment and widening of roads constructed in the early stages of the first five-year plan (prepared in 1936, but suspended because of the war), now below the accepted standard necessary for modern traffic, (ii) the construction or reconstruction of existing unimproved main roads, and (iii) the construction of roads to assist development in the newer settled areas, with particular reference to the south-eastern part of the State. The continuing shortages of man-power and materials, and difficulties in securing road-making plant and machinery, however, have prevented the progress from being as much as was expected.

(b) *Receipts and Payments.* The following table shows particulars of receipts and payments, during the years 1938-39 and 1944-45 to 1947-48, of funds controlled by the Highways and Local Government Department. Wholly comparable figures for 1938-39 are not available.

HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT: RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1944-45.	1945-46.	1946-47.	1947-48.
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. . .	690,849	569,380	612,349	681,573	718,951
Commonwealth and Federal Aid Roads and Works Acts . .	479,922	241,112	354,050	526,686	637,520
Loans from State Government . .	200,000	..	..	..	100,000
Recoups—Local and Semi-governmental Authorities . .	1,531	9,923	1,945	2,827	19,779
Other		5,342	5,318	9,373	32,434
Total	1,372,302	825,757	973,662	1,220,459	1,508,684

(a) Figures for 1938-39 are not completely comparable with those for following years.

HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT: RECEIPTS
AND PAYMENTS—*continued.*

(£.)

Item.	1938-39. (a)	1944-45.	1945-46.	1946-47.	1947-48.
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges	11,153,012	219,961 112,636	270,936 123,047	387,264 145,066	524,507 168,003
Maintenance					
Recoups to Consolidated Revenue Fund—Interest, Sinking Fund and Exchange	(c) 178,273	184,322	177,295	171,142	167,376
Grants and Advances to Local and Semi-governmental Authorities	(d)	174,106	211,575	318,222	621,553
Administration	45,753	33,134 23,820 1,441	40,971 90,657 1,652	57,362 227,167 1,791	69,848 145,179 3,951
Suspense Accounts, Plant, Machinery, etc.					
Other					
Total	1,374,108	749,420	916,133	1,308,014	1,700,417

(a) Figures for 1938-39 are not completely comparable with those for following years. (b) Roads, plant, etc. (c) Interest and sinking fund payments. (d) Not available separately.

The total expenditure, both revenue and loan, by State and local governments on roads, streets and bridges in South Australia during the years 1938-39 and 1944-45 to 1947-48 was, respectively, £1,966,000, £1,198,000, £1,461,000, £1,930,000 and £2,411,000.

6. Western Australia.—(i) *General.* Under the Main Roads Act 1930-1939 the Main Roads Board previously existing was abolished and a Commissioner of Main Roads was appointed. His duties include :—The recommending of the declaration that any road shall be, or shall cease to be, a main road, taking into account the availability of funds for main roads and the service the road is intended to render; the construction and maintenance of main roads; the carrying out of surveys, investigations and experiments connected with—the determination of main roads, the resources of the State in materials suitable for road construction and maintenance and their utilization, suitability, etc., and methods of road construction and maintenance, etc. Provision also exists for the declaration and provision of developmental roads. The Act authorizes two trust accounts (Main Roads Trust Account and Main Roads Contribution Trust Account) to record the moneys prescribed as available to the Commissioner for expenditure associated with roads, etc. In addition, the Commissioner operates on those Trust Accounts which are used for funds made available under the Commonwealth and Federal Aid Roads and Works Acts.

(ii) *Length of Roads and Streets.* The total known length of streets and roads in existence in the various municipalities at 31st October, 1948, and in road districts at 30th June, 1948, was as follows :—Concrete, 4 miles; bituminous, 3,208 miles; granite, limestone, etc., waterbound, 305 miles; gravel waterbound, 10,069 miles; other constructed surfaces, 244 miles; formed only, 28,211 miles; unprepared, 32,940 miles (incomplete); total, 74,981 miles.

The lengths of declared roads at 30th June, 1948, were :—Main roads, 3,154 miles; developmental roads, 12,115 miles; other classified roads, 24 miles; total, 15,293 miles. No new main roads were declared during the years 1946-47 and 1947-48.

(iii) *Main Roads Department.* During the year 1947-48 (1946-47 in parenthesis) the activities of the Department included :—clearing, 926 miles (261 miles); forming, 854 miles (466 miles); gravelling, 729 miles (309 miles); metalling, 3 miles (nil); reconditioning, 1,920 miles (2,285 miles); sanding, 28 miles (25 miles); side drains, 66 miles (62 miles). In addition, lengths of tar and bitumen work performed aggregated 350 miles (233 miles). Bridges constructed numbered 23 (14). In October, 1947 work was commenced on the new causeway over the Swan River. This project involves the construction of two bridges, one 737 feet long and one 382 feet long, with approach roads, and connecting road and embankments. At the end of June, 1948 work had progressed to the stage that four coffer dams were completed and two were under construction on the longer bridge. A start has been made on the widening of the principal highways converging on Perth (the necessity for which was recognized some years ago) by work during 1947-48 on sections of the Perth-Armadale Road and the Great Eastern Highway.

(iv) *Receipts and Payments—Combined Road Funds.* The following table shows the combined transactions of the Main Roads Trust Account, the Main Roads Contributions Trust Account, the Metropolitan Traffic Trust Account, the Transport Co-ordination Trust Account (up to the end of 1946-47) and the Commonwealth and Federal Aid Roads and Works Trust Accounts during the years ended 30th June, 1939 and 1945 to 1948.

ROAD FUNDS, WESTERN AUSTRALIA : RECEIPTS AND PAYMENTS.

(£.)

Item.	1938-39. (a)	1944-45. (a)	1945-46.	1946-47.	1947-48. (b)
RECEIPTS.					
Motor Vehicle Registration, Licences, Fees, Fines, etc. . .	218,962	190,611	191,167	221,010	354,946
Commonwealth and Federal Aid Roads and Works Acts . . .	823,162	399,434	594,787	893,401	1,098,758
Recoups from Local Authorities, etc.	1,958	174	2,437	16,667	15,529
Other					
		3,359	2,142	7,575	51,315
Total	1,044,082	593,578	790,533	1,138,653	1,520,548
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges . . .	922,756	268,216	239,163	541,377	920,255
Maintenance					
Other Road Works, etc. . . .	..	..	77,957	97,436	109,936
Other Works . . . . .	..	..	..	10,252	39,821
Grants to Local Authorities, etc...	..	..	..	..	54,840
Transfer to State Consolidated Revenue	143,544	113,842	115,865	141,580	142,000
Interest, Sinking Fund and Ex- change—State Consolidated Revenue . . . . .	..	30,696	33,876	37,739	67,003
Administration, Plant, etc. . .	7,616	7,616	7,402	7,399	7,391
Other	52,176	25,079	57,030	71,077	36,469
	19,181	24,508	3,219	4,601	..
Total	1,145,273	469,957	534,512	911,461	1,377,715

(a) Figures not completely comparable with those for following years.
Co-ordination Trust Account.

(b) Excludes Transport

7. *Tasmania.*—(i) *General.* Under the Transport Act 1938, which came into operation on 1st July, 1939, the Transport Commission was constituted to co-ordinate, regulate, control, and improve the means of, and facilities for, transport by road, rail or air within the State. Revenues at its disposal for road and motor traffic purposes are the Commonwealth and Federal Aid Roads and Works Grants, motor vehicle registration fees and tax, and licensing fees for drivers and public motor vehicles. Under the Roads and Jetties Act 1944, which provides for the classification of the whole of the roads of the State so that they will be adequately and efficiently maintained, the cost of maintenance of roads classified as State highways, tourist roads and developmental roads is borne by the Transport Commission. It is also responsible for a proportion of the cost of maintenance of main and secondary roads. Municipal councils bear the cost of maintaining country roads and a proportion of the cost of main and secondary roads, except in special cases. The cost of construction of roads and bridges in Tasmania is borne almost entirely by the State Government. The expenditure of the Public Works Department (the construction and maintenance authority for the Transport Commission) during 1947–48 on roads, tracks and bridges amounted to £693,198, of which £609,981 was charged to road funds, £17,073 to revenue, £65,274 to loan and £870 to Crown lands funds.

(ii) *Length of Roads.* (a) *Classified Roads.* The mileages of classified roads in Tasmania at 30th June, 1948 were as follows:—State highways, 1,199 miles; main roads, 662 miles; secondary roads, 186 miles; tourist roads, 50 miles; developmental roads, 12 miles; total 2,109 miles. Country roads totalled 10,276 miles. The mileage of sealed roads were:—State highways, 537 miles (45 per cent.); main roads, 137 miles (21 per cent.); secondary roads, 6 miles (3 per cent.); total, 680 miles (32 per cent. of all classified roads, and 6 per cent. of all roads, in Tasmania).

(b) *Composition of Roads.* The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1942 (the latest date for which this information is available) was as follows:—Sheet asphalt on concrete base, 1 mile; other bituminous, 788 miles; concrete, 6 miles; granite, limestone, etc., waterbound, 4,797 miles; surfaces of lower grade, 6,794 miles; total, 12,386 miles.

(iii) *Transport Commission.* The principal improvement and reconstruction works carried out during 1947–48 included the construction of the Northern Outlet Road, the widening of the Huon Road, the West Tamar Highway deviation, and the construction of the Zeehan-Renison Bell Road, the expenditure for these projects amounting to almost £80,000. The resealing programme carried out during the same year was the largest ever attempted by the Public Works Department. A total of 195 miles was sealed, 43 miles more than for the previous year. The sealing carried out included 68 miles of normal resealing and 127 miles of war-time lag.

(iv) *Receipts and Payments—Combined Road Funds.* The table hereunder shows particulars of the receipts and payments of the combined Road Fund and Commonwealth and Federal Aid Roads and Works Funds under the control of the Transport Commission for the years 1939-40 and 1944-45 to 1947-48 :—

ROAD FUNDS, TASMANIA : RECEIPTS AND PAYMENTS.
(£.)

Item.	1939-40. (a)	1944-45. (a)	1945-46.	1946-47	1947-48.
RECEIPTS.					
Motor Vehicle Taxation and Registration, Licences, Fees, Fines, etc.	193,165	204,685	219,486	241,438	264,780
Commonwealth and Federal Aid Roads and Works Acts . .	220,241	105,032	155,416	232,944	286,158
Recoups from Local Authorities, etc. . . . .	..	..	4,207	7,365	8,660
State Loan Fund . . . .	..	..	..	..	28,795
Other	719	85,920	15,443	30,448	37,470
Total	414,125	395,637	394,552	512,195	625,863
PAYMENTS.					
Construction and Reconstruction of Roads and Bridges . .	127,929	71,636	150,959	284,283	379,050
Maintenance	113,100	178,642	104,138	257,145	254,056
Jetties, etc.	22,467		4,129	4,658	4,682
Other Road Works	2,995		11,041	13,589	23,724
Other works connected with Transport	5,748				
Grants to Local Authorities, etc. . . . .	..	..	825	6,451	258
Administration	15,053	28,375	39,725	47,836	52,199
Other	31,894	88,262	6,807	58,720	54,572
Total	319,285	366,915	377,924	672,682	781,704

(a) Figures not completely comparable with those for following years.

(v) *Hobart Bridge.* Under the Hobart Bridge (Acquisition and Administration) Act 1944 the Transport Commission is responsible for the administration, control and management of the Hobart Bridge and transport services. Receipts from bridge tolls for the year ended 30th June, 1948 amounted to £32,291 compared with £33,002 during 1946-47. Expenditure was £9,993 compared with £8,258, and capital expenditure amounted to £19,827 and £20,149, 1947-48 and 1946-47 respectively. Net profit was £2,471 and £4,595. Capital cost to 30th June, 1948 amounted to £303,916.

8. *Summary of Roads used for General Traffic.*—(i) *Proclaimed or Declared Roads.* The table hereunder is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30th June, 1948. These proclaimed or declared roads are those for which the central road authority assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, the following points are, in general, amongst the more important of those to be considered :—(a) the funds available or likely

to be available for main roads; (b) whether the road is, or will be, the main trunk route connecting any large producing district with its market or point of shipment; (c) whether the road is, or will be, the main trunk route of intercommunication between two or more such districts or between two or more large centres of population; (d) whether the road is, or will be, the main trunk route between the capital of the State and any large producing district or any large centre of population; (e) whether the road is, or will be, the main trunk route between the capitals of two or more States; (f) whether the district concerned is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main. The absence of a particular class from the following data for any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g. insufficiency of funds, manpower or materials, etc.—construction or maintenance may not keep pace with gazettals of mileages, and that therefore the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS: LENGTHS, 30th JUNE, 1948.

(Miles.)

Class of Road.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.				
State highways	6,490	3,846	7,262	8,122	3,154	1,199	67,522				
Trunk roads	3,741	9,806	10,605								
Ordinary main roads	12,635										
Total Main Roads	22,866	13,652	17,867	8,122	3,154	1,861	67,522				
Secondary roads	56	..	538	..	..	186	780		
Developmental roads	2,801	..	245	..	12,115	12	15,173				
Tourist roads .. ..	..	402	256	..	..	50	708	
Other roads .. ..	..	(a) 241	(b) 831	..	24	..	1,096			
Total Other Roads	2,857	643	1,870	..	12,139	248	17,757				
Grand Total	25,723	14,295	19,737	8,122	15,293	2,109	85,279				

(a) Forest roads.
tourist tracks, 2 miles.

(b) Includes mining access roads, 673 miles; farmers' roads, 156 miles;

(ii) *Composition of Roads.* The following table represents an attempt to classify all the roads used for general traffic in Australia, at the latest date available, according to States and to certain broad composition groups. The results are not entirely satisfactory, (i) because the whole of Australia is not covered, (ii) because the dates of reference differ, and (iii) because the figures constituting each group are not wholly comparable, State by State. It is hoped, however, despite these defects, that the table will provide an approximate and general idea of the main types of roads in Australia.

The data in the table are compiled from publications of the State Government Statisticians, and are derived mainly from local government sources. They therefore exclude the Territories of the Commonwealth and probably unincorporated areas in some States. Furthermore, the figures on the returns supplied by the local government authorities are in some cases of doubtful accuracy. Details of the composition of roads, as far as they are available, vary to such an extent between States that it was considered preferable to show here only major divisions, rather than to attempt greater dissection, which would have resulted either in a lengthy total column incomplete for most of its items, or, by the expedient of "forcing", in some mixed classes of little value. Even the broad classes shown suffer somewhat from this latter defect, but not to an extent sufficient to mar the table as a whole.

Groups 1-4 as shown in the table include, respectively, the following types of composition :—

1. *Wood or Stone.* Wood blocks ; stone paved.
2. *Concrete.* Cement concrete ; asphaltic concrete ; bituminous concrete ; sheet asphalt on concrete base.
3. *Bituminous.* Tar or bituminous macadam ; tar and bituminous surface seal ; surfaced water-bound macadam or gravel ; bituminous or cement penetration.
4. *Macadam and Other.* Water-bound macadam ; granite, limestone, and blast-furnace slag, water-bound ; gravel water-bound ; gravel or crushed rock ; metalled (gravel or rubble) ; gravel, sand and hard loam pavements.

Groups 5 and 6 include roads so-called mainly because they are used for general traffic, irrespective of their surfaces, prepared or otherwise.

It will be noticed that some of the terms used above are practically synonymous. Such terms are, of course, not used by any one State, but are the classifications adopted by different States.

For details of any particular State, see the respective paragraphs in the preceding pages.

ALL ROADS USED FOR GENERAL TRAFFIC : LENGTHS. (Miles.)

Composition of Road.	N.S.W. 1946.	Victoria. 30th Sept., 1948.	Q'land. 30th June, 1948.	S. Aust. 30th June, 1948.	W. Aust. 1948. (a)	Tasmania. 30th June, 1942.	Total.
1. Wood or stone ..	..	62	..	8	..	..	70
2. Concrete ..	589	352	86	395	4	7	1,433
3. Bituminous ..	7,549	10,241	3,876	4,283	3,208	788	29,945
4. Macadam and other ..	33,017	28,418	8,157	13,429	10,618	4,797	98,436
5. Formed only ..	26,114	23,901	44,602	9,307	28,211	(b) 2,424	134,559
6. Cleared, or natural surface, only ..	57,174	38,437	78,803	25,220	32,940	(b) 4,370	236,944
Total ..	124,443	101,411	135,524	52,642	74,981	12,386	501,387

(a) Municipalities, 31st October and Road Districts, 30th June.

(b) Estimated dissection.

NOTE.—In addition to the foregoing, there are 453 miles of roads in the Australian Capital Territory and 6,793 miles of roads and tracks in the Northern Territory. The bulk of the former fall within groups 3 and 4, and of the latter within groups 5 and 6. Including these, the total length of roads, etc. for Australia amounts to 511,638 miles.

It will be seen from the foregoing table that a little more than one-quarter of the road lengths of Australia has actually been constructed, the remainder, for the greater part, being in little more than the natural state. The percentages for each group are as follows :—Group 1, 0.01 ; Group 2, 0.29 ; Group 3, 5.97 ; Group 4, 19.63 ; Group 5, 26.84 ; Group 6, 47.26. The percentage of constructed lengths to total length in each State is as follows :—New South Wales, 33 ; Victoria, 39 ; Queensland, 8 ; South Australia, 34 ; Western Australia, 18 ; Tasmania, 45. Comparisons between the States should be made with caution, however, because, in addition to the defects enumerated at the beginning of this section, factors such as the area, physiography, density and distribution of population, nature of economic activity, other facilities for transport, etc., in each State must be taken into account.

9. *Summary of Expenditure on Roads and Bridges.*—(i) *General.* Figures showing the total expenditure on roads and bridges in all States are not available. Such totals are very difficult to obtain, not only because of the number of States, but also because of the number of authorities concerned. In most States there are three classes of authorities—the State Government, the central road authority, and the numerous local government bodies. Both State Government and local government bodies operate

through revenue and loan funds, and payments may be made by the State Government direct from either fund, or through the funds of other authorities. The expenditure of the central road authority may also be direct or indirect. Consequently the problem of duplication caused by inter-fund payments arises. On the other hand, some expenditure may be omitted because separate particulars are not available, or they may be overlooked by the compiler. Ignorance of the precise nature of items may cause either incorrect inclusion or omission. To produce accurate figures would entail more research than at present can be undertaken.

The two paragraphs following therefore represent only: (i) aggregate expenditure from the various State road funds referred to in the foregoing pages, and (ii) loan fund expenditure by State Governments. No direct expenditure by local government bodies is included. Sub-section 2. Finances, of § 2. Local Government Authorities, contains some particulars of local government revenue and expenditure in connexion with roads, streets and bridges (*see* pages 658 and 661).

(ii) *Aggregate Expenditure from State Road Funds.* The following table shows the expenditure on the construction and maintenance of roads, including payments to local government bodies, by each State during the years 1938-39 and 1944-45 to 1947-48, as summarized from the foregoing sections. Expenditure on administration, debt charges, Commonwealth defence works, payments to State consolidated revenues, and on plant and materials is not included. In some instances expenditure on works other than roads and bridges is included. Figures are not completely comparable as between States, and, in some States, as from year to year.

ROADS AND BRIDGES : AGGREGATE EXPENDITURE FROM ROAD FUNDS.

(£'000.)

Year ended 30th June—	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
1939 ..	3,257	2,099	2,405	692	1,067	(b) 272	9,792
1945 ..	2,954	977	1,275	507	382	250	5,445
1946 ..	2,373	1,071	1,341	605	433	331	6,154
1947 ..	3,305	1,976	2,613	851	791	566	10,102
1948 ..	3,886	3,113	3,039	1,314	1,212	675	13,239

(a) Excludes Sydney Harbour Bridge.

(b) Year 1939-40.

The foregoing particulars do not represent the total expenditure on roads and bridges in each State. To obtain such information additions must be made on account of (i) State Government expenditure from revenue and loan, and (ii) local government expenditure from revenue and loan, while, on the other hand, allowances must be made for inter-fund payments. (*See* par. (i) above.)

(iii) *State Net Loan Expenditure.* In recent years, expenditure from State loan funds on roads and bridges has not been large, and it would appear, also, that a considerable proportion passes through the funds of the central road authorities and is therefore included in the figures on their financial operations in the foregoing sections, while, on the other hand, it must be supplemented by expenditure from State revenue. Gross loan expenditure by all State Governments during each of the years 1946-47 and 1947-48 amounted to a little over £1,000,000, and net expenditure to considerably less. Aggregate net loan expenditure on roads and bridges in each State to 30th June, 1948 amounted to the following approximate sums:—New South Wales, £21,000,000; Victoria, £13,000,000; Queensland, £8,000,000; South Australia, £4,000,000; Western Australia, £3,000,000; Tasmania, £6,000,000; total, £55,000,000.

§ 5. Water Supply, Sewerage and Drainage.

NOTE.—See also Chapter XXV.—Water Conservation and Irrigation.

1. **New South Wales.**—(i) *General.* The largest two domestic water supply and sewerage systems are controlled by statutory boards each consisting of a president and a vice-president appointed by the State Government and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e., in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, and (b) the Hunter District Water Board, serving the Newcastle area. At Broken Hill a similar board includes a representative of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal and shire councils.

(ii) *Water Supply—to 30th June, 1948. (a) Metropolitan.* The storage reservoirs of the metropolitan system, with a combined available capacity of 125,144 million gallons, drain catchment areas of 376 square miles (Upper Nepean, 347 square miles and Woronora, 29 square miles). Water is drawn also from the Warragamba River, with a catchment of 3,383 square miles. This system is being developed, and proposals exist for a dam to be built to a height of 348 feet above bed level, giving a safe draught of 260 million gallons per day. The existing temporary storage is supplied by a weir 50 feet high with a maximum daily off-take of 40 million gallons. At 30th June, 1948 there were 92 service reservoirs in use with a combined capacity of 537.1 million gallons. Rating for water for 1947-48 was 9½d. in the £1 of assessed annual value and the charge for water measured by meter 1s. 2d. per 1,000 gallons.

(b) *Newcastle.* The water supply is drawn from two sources (1) the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and (2) the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 106 million gallons. Water rating for 1947-48 was 1s. in the £1 on assessed annual value (approval was given to the provision for an increase of 3d. in the £1 as from 1st July, 1948). The price of water to domestic and industrial consumers is 1s. 3d. per 1,000 gallons.

(c) *Water Supplied, etc.* The following tables show, for the Sydney and Newcastle systems, the number of properties, the estimated population supplied, and other details for the years 1946-47 and 1947-48:—

WATER SUPPLY, SYDNEY (a) : SERVICES.

Year.	Improved Properties for which Water Main available.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Property.	Per Head of Estimated Population.		
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1946-47 ..	387,980	1,718,000	131.2	47,874	338	77.1	4,743	160,169
1947-48 ..	400,615	1,774,300	122.1	44,682	305	69.6	4,817	170,124

(a) Includes part of South Coast.

WATER SUPPLY, NEWCASTLE : SERVICES.

Year.	Pro- perties Supplied.	Esti- mated Popu- lation Supplied	Average Daily Supply.	Total Supply for Year.	Average Daily Supply.		Length of Mains.
					Per Pro- perty.	Per Head of Esti- mated Popu- lation.	
	No.		Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.
1946-47	56,804	223,656	18.9	6,900	333	83.9	1,134
1947-48	58,660	231,600	18.5	6,774	316	79.3	1,169

(iii) *Sewerage and Drainage*—to 30th June, 1948. (a) *Metropolitan*. The Sydney sewerage system consists mainly of outfall systems discharging into the Pacific Ocean. At 30th June, 1948 there were six outfalls and six treatment works.

Stormwater drainage channels under the Metropolitan Water, Sewerage and Drainage Board's control at the same date were 129 miles long. Sewerage rating for 1947-48 was 9½d. in the £1 of assessed annual value and drainage from ½d. to 3d.

(b) *Newcastle*. The main sewerage system of the Newcastle area discharges into the Pacific Ocean at Merewether Gulf. In some of the outlying districts treatment works have been installed.

Sewerage rates for 1947-48 were 1s. 3d. in the £1 of assessed annual value and drainage rates (on certain areas served) 3d. in the £1. Approval has been given for the reduction of 1d. in the £1 on stormwater drainage rates.

(c) *Particulars of Services*. The following table supplies, for the Sydney system, details of sewerage services and stormwater drains as at 30th June, 1947 and 1948.

SEWERAGE AND DRAINAGE, SYDNEY(a) : SERVICES.

At 30th June—				Improved Properties for which Sewer Available.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Sewers.	Length of Storm- water Channels.
				No.		Mill. gals.	Miles.	Miles.
1947 .. ..	..	..	..	287,098	1,197,755	9,604	2,805	117
1948 .. ..	..	..	..	291,069	1,263,439	9,894	2,829	129

(a) Includes part of South Coast.

At 30th June, 1948 (at 30th June, 1947 in parenthesis) 41,261 (39,886) premises had been connected to the Hunter District Water Board's sewerage system (Newcastle area). The total length of sewers under the Board's control was 596 (586) miles, and the length of drains over 24 inches diameter was 38 (38) miles.

(iv) *Finances, Sydney and Newcastle Systems*. The following statement shows the debt, revenue and expenditure on account of the services of water supply, sewerage and drainage by the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board during 1946-47 and 1947-48.

WATER SUPPLY, SEWERAGE AND DRAINAGE, SYDNEY(a) AND NEWCASTLE : FINANCES.
(£.)

Service.	Capital Debt.	Revenue.	Expenditure.			Total.	Surplus (+) or Deficit (—).
			Working Expenses. (b)	Interest and Exchange.	Sinking Fund and Loan Repayment.		
1946-47.							
Sydney (a)—							
Water ..	30,091,515	2,506,085	1,112,115	1,150,515	220,171	2,482,801	+ 17,278
Sewerage ..	17,771,447	1,445,285	615,771	721,546	124,847	1,462,164	— 16,879
Drainage ..	(c)923,693	80,202	35,125	39,546	5,331	80,002	+ 200
Total ..	48,786,655	4,031,572	1,763,014	1,917,607	350,352	4,030,973	+ 599
Newcastle—							
Water ..	4,551,502	333,164	144,456	168,507	27,454	340,417	— 7,253
Sewerage ..	2,349,106	194,952	86,700	91,945	13,483	192,128	+ 2,824
Drainage ..	138,157	20,074	4,976	5,672	903	11,551	+ 8,523
Total ..	7,038,765	548,190	236,132	266,124	41,840	544,096	+ 4,094
1947-48.							
Sydney (a)—							
Water ..	32,220,977	2,562,670	1,123,518	1,198,278	240,069	2,561,865	+ 805
Sewerage ..	18,029,075	1,554,141	689,004	724,427	130,287	1,543,718	+ 10,423
Drainage ..	(c)935,043	81,975	34,799	39,619	5,580	79,998	+ 1,977
Total ..	51,185,095	4,198,786	1,847,321	1,962,324	375,936	4,185,581	+ 13,205
Newcastle—							
Water ..	4,757,073	355,528	159,913	172,230	29,547	361,690	— 6,162
Sewerage ..	2,398,127	200,725	93,211	93,098	14,125	200,434	+ 291
Drainage ..	139,668	20,719	4,535	5,201	971	10,707	+ 10,012
Total ..	7,294,868	576,972	257,659	270,529	44,643	572,831	+ 4,141

(a) Includes part of South Coast. (b) Includes provision for renewals, long service leave, loss on exchange, etc. (c) Excludes non-interest bearing capital in respect of stormwater drains transferred from Public Works Department—£1,254,320 at 30th June, 1948.

(v) *Country Water Supply and Sewerage Systems.* At 31st December, 1946 country water supply services were conducted or under construction by 73 municipalities, 42 shires and 5 county councils, and country sewerage services by 51 municipalities, 10 shires and one county council. The capital indebtedness of these schemes was £7,009,677 at 31st December, 1946, namely, £4,394,088 for water and £2,615,589 for sewerage. Of the foregoing amounts, Government advances amounted to £583,129. Debt of the municipalities amounted to £4,790,697, shires to £829,273 and county councils to £1,389,707. Aggregate income and expenditure, respectively, amounted to £1,000,152 and £852,687 during 1946, and to £944,657 and £823,325 in 1945.

(vi) *Other Water Supply and Sewerage Systems.* The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31st December, 1948 was £624,955. Income and expenditure, respectively, were £95,504 and £103,864 for 1948 and £81,222 and £92,651 for 1947.

The following country water supply systems—South-West Tablelands, Junee and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Railways Department, and other large consumers; only a small quantity is sold directly to private consumers. The capital indebtedness of these systems was £2,282,034 at 31st December, 1948.

There are also the Mulwala Water Supply and Sewerage Service constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System administered by the Department of Public Works in conjunction with the Junee supply.

2. **Victoria.**—(i) *Melbourne and Metropolitan Board of Works—to 30th June, 1948.*

(a) *General.* The metropolis, for water supply, sewerage and drainage and river improvement purposes, comprises all that land within a radius of 13 miles of the Post Office at the corner of Bourke and Elizabeth-streets, Melbourne, and the remaining portions of the Cities of Moorabbin, Mordialloc, and Nunawading and the shire of Mulgrave and certain portions of the remainder of the Shires of Eltham, Doncaster and Templestowe, and Dandenong, but excludes a portion of the Shire of Werribee within such radius. This territory has an area of 450 square miles and comprises 27 cities and one shire and parts of one other city and 9 other shires. The Board comprises 48 members, including the chairman, who is elected every four years by the other members. These members, or commissioners, are from time to time elected by the councils of the municipal districts wholly or partly within the metropolis. The principal functions of the Board are to control and manage the metropolitan water supply system; to provide the metropolis with an efficient system of main and general sewerage; to deal with main drains and main drainage works; and to control and manage the rivers, creeks and watercourses within the metropolis.

(b) *Water Supply.* There are five storage reservoirs serving the metropolitan area—Yan Yean, 7,234 million gallons (available for consumption, 6,605 million gallons); Toorourrong, 60 million gallons; Maroondah, 6,274 million gallons (4,855 million gallons); O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons (8,823 million gallons); total 23,351 million gallons (21,273 million gallons). Service reservoirs number 25, with a total capacity of 262 million gallons. Preparatory work has been undertaken on the Upper Yarra Dam project, immediately upstream from the confluence of the Yarra and Doctor's Creek. The dam will impound 30,000 million gallons. The preliminary estimate of the cost, including all road deviations and improvements, rail facilities and electric power installation, is £3,800,000.

The following table shows particulars of Melbourne metropolitan water supply services for 1946-47 and 1947-48. The rate levied in 1947-48 was 6d. in the £1 on the net annual value of the property served. There is a charge of 1s. per 1,000 gallons of water supplied by meter.

WATER SUPPLY, MELBOURNE : SERVICES.

Year.	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for the Year.	Average Daily Consumption.		Length of Aqueducts, etc., Mains and Reticulation.	Number of Meters.
					Per House.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1946-47	..	312,735	87.9	32,092	281	70.8	3,594	218,744
1947-48	..	320,798	91.9	33,651	287	72.1	3,691	220,992

(c) *Sewerage and Drainage.* Particulars of sewerage and drainage services for 1946-47 and 1947-48 are shown below. The rate levied in 1947-48 in respect of sewerage was 1s. in the £1 on the net annual value of the property served. The drainage rate was 1d. in the £1.

SEWERAGE AND DRAINAGE, MELBOURNE : SERVICES.

Year.	Number of Houses for which Sewers are Provided.	Estimated Population for which Sewers are Provided.	Average Daily Pumping.	Total Sewage Pumped for the Year.	Average Daily Pumping.		Length of Sewers, etc.	Length of Main Drains.
					Per House.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	Miles.
1946-47	294,343	1,168,542	59.1	21,570	200.8	50.6	2,773	117
1947-48	302,433	1,202,000	61.6	22,551	203.8	51.3	2,814	122

The metropolitan sewerage system consists of the Main system (serving an area of 65,884 acres) and three subsidiary systems—the Sunshine system (serving an area of 911 acres in the Shire of Braybrook, including the township of Sunshine), the Kew system (serving an area of 99 acres in Kew) and the South-eastern system (serving an area of 1,868 acres in Cheltenham, Parkdale, Mentone and Mordialloc). The Metropolitan Sewage Farm, 24,610 acres in extent and situated about 24 miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of more than 99 per cent. of the sewage flow of the metropolis before its discharge into Port Phillip Bay. The total capital cost (less depreciation) to 30th June, 1948 was £1,618,536. Revenue during 1947-48 (1946-47 in parentheses) amounted to £60,615 (£61,632), cost of sewage disposal £91,368 (£84,947), trading expenses £41,184 (£41,417), interest £61,354 (£56,361), and net cost of sewage purification £133,291 (£121,093). These financial particulars are included in the sewerage items of the summary below.

At 30th June, 1948, the Melbourne and Metropolitan Board of Works had 122 miles of main drains under its control—101 miles of underground, 12 miles of constructed open drains, and 9 miles of natural watercourses and unlined open drains.

(d) *Finances.* The following table provides a summary, for the years 1946-47 and 1947-48, of the financial operations of the three services conducted by the Melbourne and Metropolitan Board of Works :—

MELBOURNE AND METROPOLITAN BOARD OF WORKS : FINANCES.

(£.)

Service, etc.	Capital Cost. (a)	Revenue.	Expenditure.				Surplus (+) or Deficit (-).
			Working Expenses, etc.	Interest and Exchange.	Sinking Fund.	Total.	
1946-47.							
Water ..	13,851,065	1,086,847	515,470	532,348	..	1,047,818	+ 39,029
Sewerage ..	15,675,892	1,200,027	390,579	599,169	..	989,748	+ 210,279
Drainage ..	1,910,260	103,073	29,478	58,169	..	87,647	+ 15,426
General(b) ..	..	..	294,766	46,413	65,090	406,269	..
Total ..	31,443,217	2,389,947	1,230,293	1,236,099	65,090	2,531,482	- 141,535
1947-48.							
Water ..	14,552,190	1,167,610	596,972	554,751	..	1,151,723	+ 15,887
Sewerage ..	16,178,614	1,246,670	436,388	622,834	..	1,059,222	+ 187,448
Drainage ..	2,019,048	107,086	22,786	61,787	..	84,573	+ 22,513
General(b) ..	..	..	197,582	..	67,340	264,922	..
Total ..	32,749,852	2,521,366	1,253,728	1,239,372	67,340	2,560,440	- 39,074

(a) Includes depreciation, £395,525. Total loan indebtedness—1946-47, £26,036,165; 1947-48 £26,936,165.

(b) Statutory and general expenditure not distributed over Services.

(ii) *Geelong Waterworks and Sewerage Trust. (a) General.* The Geelong Waterworks and Sewerage Trust, constituted in 1908 and reconstituted under the Geelong Waterworks and Sewerage Act in 1910, consists of five commissioners. The amount of loan money which may be raised is limited to £900,000 for water supply undertaking, £760,000 for sewerage undertaking, and £270,000 for sewerage installation to properties under the deferred payment system. The population supplied is estimated by the Trust at 54,200. This and other general information relates to 30th June, 1948.

(b) *Water Supply.* The catchment area is about 16,000 acres. There are five storage reservoirs and seven service basins whose total storage capacity is 2,738 million gallons. In addition, the State Rivers and Water Supply Commission has made available a supplementary supply of a minimum quantity of 545 million gallons of water per annum from the Bellarine Peninsula System. There are 320 miles of mains within the water supply area. The total expenditure on water supply to 30th June, 1948 was £833,039. Expenditure for 1947-48 comprised £33,447 (£30,130 in 1946-47) on working expenses and £39,381 (£32,378 in 1946-47) on interest, sinking fund and reserves, and the revenue for the year 1947-48 was £72,024 (£68,596 in 1946-47). The sinking fund appropriations at June, 1948 amounted to £109,079. The replacement and contingencies reserve amounted to £136,548. There is a water rate of 1s 3d. in the £1 (with minima of five shillings for unbuilt-on land and £1 for tenements) on the net annual value of ratable properties.

(c) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 149 miles of main and reticulation sewers. The sewerage area is 9,571 acres, and the number of buildings within the sewered areas is 13,080, of which 13,061 have been connected. The number of buildings within the drainage area is 13,331. The total expenditure to 30th June, 1948 on sewerage works was £603,578, and on the cost of sewerage installation under deferred payment conditions £257,897, of which £118 is outstanding. The revenue in 1947-48 amounted to £48,269 (£46,674 in 1946-47) and the expenditure comprised £12,132 (£9,920 in 1946-47) on working expenses and £35,475 (£33,289 in 1946-47) on interest, sinking fund and reserves. Sinking fund appropriations at June, 1948 were £97,944. Replacement and contingencies reserve amounted to £113,587. A general rate of 1s. 3d. in the £1 is levied on the net annual value of ratable properties.

(iii) *The Ballarat Water Commission and the Ballarat Sewerage Authority. (a) General.* The Ballarat Water Commission was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commission constitute the Sewerage Authority. The Commissioners number seven, three (one of whom is chairman) being appointed by the Government, and four being elected by the Council of the City of Ballarat. General information is as at 31st December, 1948.

(b) *Water Supply.* The Water Supply District embraces an area of about 65 square miles, containing a population of about 50,000. The total storage capacity of the six reservoirs is 2,332 million gallons and the catchment area is 17,545 acres.

The capital cost of construction of the waterworks was £1,109,210 to 31st December, 1948. The liabilities are loans due to the Government, amounting to £612,359 at 31st December, 1948. The revenue for the year 1948 was £58,286 (£44,580 in 1947). Working expenses during 1948 amounted to £31,210 (£26,422 in 1947) and interest and other charges to £28,178 (£22,692 in 1947). A rate is levied of 1s. 1d. in the £1 on the net annual value of all ratable properties, with a minimum of 15s. per annum for land on which there is a building or water supply.

(c) *Sewerage.* The scheme as designed provides for a population of 90,000 persons, but at 30th June, 1948 about 40,000 persons were being served. The capital cost of sewerage construction works to 31st December, 1948 was £515,136. The method of sewage disposal is by sedimentation, oxidation and sludge digestion. One hundred and eleven sewered areas had been declared as at 31st December, 1948. Assessments in the sewerage district numbered 13,143, while those in sewered areas numbered 10,430. There were 9,198 tenements connected.

The scheme is financed by debenture-issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31st December, 1948 amounted to £430,045, redemption payments at that date totalling £138,310. An

expenditure of £157,122 was incurred for house connexions, the whole of which has been redeemed. Revenue during 1948 (1947 in parentheses) amounted to £40,274 (£36,741) and expenditure, including £25,835 (£24,264) on interest and redemption, to £38,609 (£36,426).

A general rate is levied of 1s. 6d. in the £1 of the net annual value of all properties within the drainage area.

(iv) *Sewerage Authorities.* At 30th June, 1948, 47 sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts in districts outside the areas under the control of the Melbourne and Metropolitan Board of Works and the Geelong Waterworks and Sewerage Trust, and systems were in operation in 27 districts (including four partly operating) serving a population of 180,400 persons.

In addition, sewerage authorities were constituted in a further 20 districts at this date, but their operations had either been suspended or had not commenced.

(v) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but in some instances the control is by waterworks trusts or by municipal corporations.

The waterworks controlled by the State Rivers and Water Supply Commission at 30th June, 1948 included 35 large reservoirs and 226 subsidiary reservoirs and service basins with a total storage capacity of 536,400 million gallons (1,970,250 acre feet). Length of channels was 15,096 miles (irrigation, 4,450 miles, domestic and stock, 8,489 miles, drainage and flood protection, 2,157 miles) and of pipe lines 1,133 miles. The quantity of water delivered to water users during 1947-48 was 618,839 acre feet (730,413 acre feet in 1946-47). The Commission administered 80 rural districts during 1947-48 (28 irrigation districts, 34 waterworks districts, 4 flood protection districts and 14 drainage districts), and the reticulated pipe supplies for domestic and industrial purposes in 127 urban districts. In addition, 118 urban districts were administered by waterworks trusts and 15 by local governing bodies. The populations served in these groups of urban districts numbered, respectively, 140,840, 235,550 and 78,950 persons. The table below is a summary of the Commission's finances for operations in districts under its control for the years 1946-47 and 1947-48 :—

STATE RIVERS AND WATER SUPPLY COMMISSION, VICTORIA : FINANCES. (a)
(£.)

Year.	Total Loan Capital Expenditure to 30th June.	Receipts.	Payments.				
			Operating Expenses.	Interest on Capital Allotted.	Depreciation.	Redemption.	Total.
1946-47 ..	27,632,136	919,347	1,084,841	39,061	118,701	1,678	1,245,181
1947-48 ..	29,228,673	1,050,528	1,199,552	39,836	55,303	1,660	1,296,351

(a) Excludes Waterworks Trusts and Local Governing Bodies.

The total loan capital expenditure of waterworks trusts and local governing bodies at 30th June, 1948 was £4,573,708, making a grand total of £33,802,381 when added to the figure for works under the control of the Commission. The net loan capital after redemption payments of £1,566,083 was £32,236,298.

The financial operations of the State Rivers and Water Supply Commission form part of Consolidated Revenue Fund, but are included in this section for convenience. The major proportion of the interest payable is borne by the State and is additional to that shown above. The net expenditure borne by the State during 1947-48 was £1,409,488 (£1,246,931 in 1946-47).

3. **Queensland.**—(i) *Department of Works, Brisbane City Council—to 30th June, 1948.* (a) *General.* This organization conducts the water supply and sewerage systems of the City of Greater Brisbane, extending them, in the case of water supply, to the Cities of Ipswich and Redcliffe. Prior to 1928 water and sewerage activities had been controlled by the Metropolitan Water and Sewerage Board, but were then absorbed by the Brisbane City Council.

(b) *Water Supply.* Water storage facilities comprise the following (available capacities are shown in parenthesis):—Somerset Reservoir, 32,000 million gallons (32,000 million gallons); Lake Manchester, 5,806 million gallons (5,725 million gallons); Brisbane River, 543 million gallons (484 million gallons); Pure Water Reservoir, Holt's Hill, 2.5 million gallons (2.5 million gallons); Enoggera Reservoir, 1,000 million gallons (631 million gallons); Gold Creek Reservoir, 407 million gallons (400 million gallons). There are ten service reservoirs with a capacity of approximately 35.1 million gallons. The Somerset reservoir is under the control of the Stanley River Works Board and is a dual purpose project with a designed total holding capacity of 200,000 million gallons, 55,000 million gallons to be for water storage and 145,000 million gallons for flood mitigation. Water rating at 30th June, 1948 was 5d. in the £1 of unimproved capital value for improved properties, and 3d. in the £1 for vacant lands, with a minimum of £3 10s. and £2 6s. 8d. respectively. The following table is a summary of operations of the complete Brisbane City Council system (metropolitan area, Ipswich and Redcliffe) for the years 1946-47 and 1947-48:—

WATER SUPPLY, BRISBANE (a) : SERVICES.

Year.	Services Connected.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for year.	Average Daily Consumption.		Length of Trunk and Reticulation Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1946-47	..	98,803	405,093	22.8	8,317	36.3	1,209	52,645
1947-48	..	103,846	425,769	22.9	8,365	53.7	1,330	52,699

(a) Includes Ipswich and Redcliffe.

(c) *Sewerage.* The districts provided for in the Brisbane sewerage scheme comprise the original cities of Brisbane and South Brisbane, the towns of Hamilton, Ithaca, Toowong and Windsor, the shire of Coorparoo and parts of the shires of Stephens, Balmoral, Taringa and Toombul. The sewage treatment works are situated at Luggage Point on the north bank at the entrance to the Brisbane River. The treatment plan is the activated sludge system, but this has not been put into operation, and since the commencement of pumping operations in 1923 a sedimentation plant only has been used. Sewerage rating at 30th June, 1948 was 3d. in the £1 of unimproved capital value for improved properties, and 2d. in the £1 for vacant lands, with a minimum of £2 2s. and £1 8s. respectively. The following table is a summary of operations of the Brisbane Sewerage Scheme for the years 1946-47 and 1947-48:—

SEWERAGE, BRISBANE : SERVICES.

Year.				Premises Connected.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Main, Branch, Reticulation, etc. Sewers.
						Mill. gals.	Miles.
1946-47	..	..	..	42,246	173,209	4,539	549
1947-48	..	..	..	43,485	178,289	4,096	567

(d) *Finances.* The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1946-47 and 1947-48 :—

WATER SUPPLY AND SEWERAGE, BRISBANE : FINANCES.
(£.)

Service and Year.	Gross Capital Cost.	Revenue.	Expenditure.			Surplus (+) or Deficit (—).
			Working Expenses.	Interest, Redemption, etc. Charges.	Total.	
Water Supply—						
1946-47	6,906,676	744,989	225,343	315,595	596,948	+ 148,041
1947-48	7,150,116	765,936	255,430	335,307	633,982	+ 131,954
Sewerage—						
1946-47	6,763,448	234,932	57,600	224,194	312,152	— 78,120
1947-48	7,048,086	254,777	63,998	246,983	343,259	— 88,482

(ii) *Country Towns.* (a) *Water Supply.* In addition to the city of Brisbane, there were at 30th June, 1947, 90 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(b) *Sewerage Systems.* At 30th June, 1947, there were 12 cities or towns outside the metropolitan area—Bundaberg, Charleville, Cunnamulla, Goondiwindi, Ipswich, Mackay, Maryborough, Quilpie, Rockhampton, Toowoomba, Townsville and Warwick—with sewerage systems. A sewerage system was in course of construction in Mt. Isa.

(c) *Finances.* The receipts (other than loan) of water and sewerage undertakings controlled by the cities and towns referred to above (excluding one joint authority classed as semi-governmental) amounted to £499,084 in 1946-47 (£522,900 in 1945-46). Expenditure amounted to £518,025, including £194,318 for debt charges (£495,891 and £186,512 in 1945-46). In addition, loan expenditure amounted to £233,668 (£157,630 in 1945-46).

4. *South Australia.*—(i) *General.* The water supply and sewerage systems in this State were constructed and are maintained by the Engineering and Water Supply Department under the control of the Minister of Works. The works controlled comprise the Adelaide, Barossa, Baroota Creek, Beetaloo, Bundaleer, Tod River, Warren and other country water districts systems, the Morgan-Whyalla water supply system, the Adelaide metropolitan sewerage system, the Murray River Weirs, water conservation, and the Metropolitan Flood Waters Scheme.

(ii) *South Australian Waterworks—to 30th June, 1948.* (a) *Services.* The table hereunder shows particulars of the area, capacity, etc. of combined metropolitan and country water works for the years 1946-47 and 1947-48 :—

WATERWORKS, SOUTH AUSTRALIA : SERVICES.

Year.	Assessments.(a)		Area of Districts Supplied. (a)	Capacity of Reservoirs, Tanks, etc.	Length of Mains.	Number of Meters.
	Number.	Annual Value.				
		£	Acres.	Million Gallons.	Miles.	
1946-47	198,952	7,190,146	11,932,461	23,920	6,927	103,514
1947-48	203,422	7,405,970	11,953,022	23,927	6,997	104,726

(a) Excludes Morgan-Whyalla Water Supply—water sold by measure.

(b) *Finances.* Figures for 1946-47 and 1947-48 are shown in the following table.

WATERWORKS, SOUTH AUSTRALIA: FINANCES.

(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit(-).
			Working Expenses.	Interest and Sinking Fund.	Total.	
1946-47 ..	19,577,522	856,733	542,203	676,604	1,218,807	- 362,074
1947-48 ..	20,229,154	935,693	588,703	680,550	1,269,253	- 333,560

(iii) *Adelaide Waterworks.* At 30th June, 1948 the Adelaide waterworks supplied a district of 143,993 acres. The capacity of its five reservoirs was 14,466 million gallons and there were 1,565 miles of mains.

Approval has been given to schemes (i) for the construction of a large reservoir on the South Para River to provide additional storage to serve the lower northern areas of the State and to make some additional provision for the metropolitan area, and (ii) for bringing River Murray water into Adelaide to supplement the metropolitan and Warren system areas and to serve country areas en route. The capacity of the new reservoir will be about 10,000 million gallons and it will cost about £1,620,000; the pipeline from the Murray near Mannum will deliver about 11,000 million gallons per annum and will cost about £3,390,000.

Particulars of finances for the years 1946-47 and 1947-48 are shown below:—

ADELAIDE WATERWORKS: FINANCES.

(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit(-).
			Working Expenses.	Interest.	Total.	
1946-47 ..	6,018,680	521,962	209,107	200,105	409,212	+ 112,750
1947-48 ..	6,253,146	574,687	211,450	203,510	414,960	+ 159,727

(iv) *Adelaide Metropolitan Sewerage.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg and Port Adelaide areas, with drainage areas of 86 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. The total quantity of sewage pumped by the various stations was 2,457 million gallons during 1947-48 as compared with 2,071 million gallons during 1946-47. Other particulars for 1946-47 and 1947-48 are shown hereunder:—

ADELAIDE METROPOLITAN SEWERAGE: SUMMARY.

Year.	Length of Sewers.	Number of Con-nexions.	Invested Capital.	Revenue.	Expenditure.			Surplus (+) or Deficit(-).
					Working Expenses.	Interest and Sinking Fund.	Total.	
	Miles.		£	£	£	£	£	£
1946-47 ..	1,008	93,440	4,034,770	307,190	135,868	144,702	280,570	+ 26,620
1947-48 ..	1,025	102,224	4,176,725	319,077	159,509	145,732	305,241	+ 13,836

(v) *Country Water Supply.* Water district systems outside Adelaide at 30th June, 1948 comprised an area of 11,809,029 acres, and the capacity of the reservoirs was 9,427 million gallons. These figures exclude the Morgan-Whyalla supply system, which obtains its water from the River Murray. The storage tanks of this system had a capacity of 44 million gallons.

Construction work is proceeding on the scheme for the augmentation of the Tod River District supplies, and for the supply of other areas not already served, by utilizing water from the Uley-Wanilla sub-artesian basin at an estimated cost of £1,500,000.

At the request of the Commonwealth, arrangements have been made for the Engineering and Water Supply Department to undertake the construction above ground of a 10-in. pipeline, together with service reservoirs, pumping stations, etc., from Port Augusta to the Rocket Range at Woomera, a distance of about 110 miles.

The following table gives financial information on country waterworks for 1946-47 and 1947-48 :—

COUNTRY WATERWORKS, SOUTH AUSTRALIA : FINANCES.(a)

(£.)

Year.	Invested Capital.	Revenue.	Expenditure.			Surplus (+ or Deficit(-)).
			Working Expenses.	Interest.	Total.	
1946-47 ..	11,231,493	244,495	307,379	394,392	701,771	- 457,276
1947-48 ..	11,643,730	270,738	337,557	395,246	732,803	- 462,065

(a) Excludes Morgan-Whyalla system.

(vi) *Morgan-Whyalla Water Supply Scheme.* This scheme, which involved the laying of 223 miles of main, was officially opened on 31st March, 1944, the capital invested to 30th June, 1948 being £2,529,956. Particulars of this scheme, where applicable, are included in the tables of the combined waterworks in section (ii) above. The water is sold by measure; hence particulars of assessments and area supplied do not apply. During 1946-47 the water used from the system between Hanson and Whyalla amounted to 508 million gallons and during 1947-48 to 814 million gallons. Revenue for the year 1946-47 was £112,962, working expenses, etc. £48,403, interest charges, £82,107 and net loss £17,548. Corresponding figures for 1947-48 were, respectively, £119,967, £69,395, £81,794 and £31,222.

5. *Western Australia.*—(i) *General.* The water supply and sewerage systems of Western Australia are principally under the management of Government Departments, and are divided into the following categories :—(a) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction and Armadale District; (b) Goldfields Water Supply; (c) Water Supply of other towns, etc.; (d) Agricultural Water Supply; and (e) Artesian and sub-artesian waters.

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (a) *General.* The sources of the metropolitan water supply are the Canning Dam, Churchman Brook, Wongong Brook, Victoria Reservoir, Armadale Pipe Head Dam and Well, and certain bores. The largest reservoir, the Canning Dam, has a capacity of 20,550 million gallons, about four and a half times that of the Mundaring Reservoir to which it is linked by a pipe line.

The sewage treatment works of Perth and suburbs consist of primary sedimentation with separate sludge digestion and discharge of all effluent direct to the ocean. Fremantle treatment works consist of septic tanks with ocean outfall for effluent. There are three treatment works, situated at West Subiaco, Swanbourne and Fremantle.

(b) *Water Supply.* The following table shows particulars of water supply services for 1946-47 and 1947-48 :—

METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA : SERVICES.

Year.	Number of Services.	Estimated Population Supplied.	Average Daily Consumption.	Total Consumption for Year.	Average Daily Consumption.		Length of Mains.	Number of Meters.
					Per Service.	Per Head of Estimated Population.		
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1946-47 ..	70,970	279,000	24.7	9,022	348	88.6	1,107	42,968
1947-48 ..	73,601	284,915	26.9	9,838	365	94.4	1,137	44,795

Water rating for 1947-48 was 1s. 6d. in the £1 on annual valuation, with a minimum of 10s.

(c) *Sewerage and Drainage.* Some particulars of the metropolitan sewerage and drainage services for 1946-47 and 1947-48 are shown below :—

METROPOLITAN SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : SERVICES.

Year.	Houses Connected.	Estimated Population Served.	Sewage Pumped for the Year.(b)	Length of Sewers.	Length of Stormwater Drains.
			Mill. gals.	Miles.	Miles.
1946-47.. ..	44,638	(a)	2,160	536	33
1947-48.. ..	45,977	193,103	2,263	550	34

(a) Revised Census figure not available.

(b) Aggregate of quantities pumped by the various stations.

Sewerage rating for 1947-48 was 1s. 2d. in the £1 on annual valuation, with a minimum of 7s. 6d. Stormwater drainage rating was 5d. with a minimum of 2s. 6d.

(d) *Finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Department for the years 1946-47 and 1947-48 :—

METROPOLITAN WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA : FINANCES,
(£.)

Service and Year.	Capital Cost.	Revenue.	Expenditure.			Surplus (+) or Deficit (-).
			Working Expenses.	Interest and Sinking Fund Charges.	Total.	
Water Supply—						
1946-47	5,516,603	372,168	110,572	236,432	347,004	+ 25,164
1947-48	5,669,789	392,761	117,930	243,613	361,543	+ 31,218
Sewerage and Drainage—						
1946-47	3,992,651	219,359	47,401	190,472	237,873	— 18,514
1947-48	4,148,756	223,090	51,119	196,965	248,084	— 24,994

(iii) *Goldfields Water Supply.* The source of supply for Kalgoorlie, Coolgardie and adjacent goldfields, as well as for the towns and districts on or near the pipeline, is the Mundaring Reservoir, which has a capacity of 4,650 million gallons. This scheme is

now linked by pipeline with the Canning Dam. Plans have been formulated by the State Government, assisted financially by the Commonwealth Government, for a comprehensively reticulated water scheme at an estimated cost of approximately £4,000,000 to serve an area of about 4,000,000 acres of farm lands and some 23 agricultural towns including the principal towns on the Great Southern Railway, and to increase the supply to the Eastern Goldfields to permit expansion of the gold-mining industry. The scheme involves the raising of the impounding walls of Mundaring Weir and Wellington Dam to increase the storage capacity of these reservoirs to 15,000 million and 38,000 million gallons respectively. The following table shows details for 1946-47 and 1947-48 :—

GOLDFIELDS WATER SUPPLY. WESTERN AUSTRALIA : SUMMARY.

Year.	Number of Services.	Total Consumption.	Length of Water Mains.	Number of Meters.	Capital Cost.	Revenue.	Expenditure. (a)	Surplus (+) or Deficit (-).
		Mill. gals.	Miles.		£	£	£	
1946-47 ..	15,130	1,975	1,757	13,163	6,283,631	343,500	396,964	— 53,464
1947-48 ..	15,411	2,028	1,768	13,423	6,425,775	338,892	480,571	— 141,679

(a) Includes interest and sinking fund.

(iv) *Water Supply of Other Towns, etc.* (a) *Controlled by Public Works Department.* During 1947-48 (1946-47 in parenthesis) water supplied to other towns and districts, excluding minor water supplies, amounted to 534 (500) million gallons, including service to adjacent mines, 17,188,700 (19,796,700) gallons, and railways, 49,542,500 (46,267,600) gallons. Estimated population served numbered 34,655 (34,648).

(b) *Controlled by Commonwealth and State Government Railways.* Consumption for the year ended 30th June, 1948 (1946-47 in parenthesis) was 347 (332) million gallons. In addition, 423 (359) million gallons were obtained from other sources, mainly the Goldfields Water Scheme and the Metropolitan Water Supply.

(c) *Water Boards not Controlled by Government.* During 1947-48 (1946-47 in parenthesis) approximately 351 (332) million gallons of water were supplied to an estimated population of 17,135 (20,183).

(v) *Agricultural Water Supply.* During the thirty-eight years from 1st July, 1910 to 30th June, 1948, 553 tanks were built, 385 wells sunk, and 3,911 bores put down to a total depth of 209,787 feet. Of the bores put down, 642 yielded fresh, and 383 stock, water.

(vi) *Artesian and Sub-artesian Waters.* Up to 30th June, 1948 the total number of bores put down in search of artesian or sub-artesian water and in which water was struck (exclusive of operations by Defence Services) was 451, ranging in depth from 21 to 4,006 feet.

6. *Tasmania.*—(i) *Waterworks.* At the end of 1947-48 (1946-47 in parenthesis) there were 36 (36) municipal waterworks in Tasmania. The capacity of the reservoirs was about 870 million gallons, the estimated population served was 171,512 (165,303), the number of properties assessed was 53,429 (52,738), and the length of aqueducts, mains and reticulation was about 1,000 miles. Costs of construction amounted to £1,874,670 (£1,840,481). The largest of these undertakings is Hobart, with a reservoir capacity at the end of 1947-48 of 578,000 gallons, and 153 miles of reticulation and 92 miles of aqueduct and main.

(ii) *Sewerage.* Sewerage in Tasmania also is the concern of local authorities.

§ 6. Harbour Boards and Trusts.

NOTE.—The number and net tonnage of all vessels which entered the major ports in each State during the years 1938-39 and 1944-45 to 1947-48 are shown in Chapter V.—Transport and Communication, § 3. Shipping at Principal Ports. Particulars of oversea and interstate cargo discharged and shipped during 1947-48 are shown in § 6 of the same chapter.

1. **New South Wales.**—(i) *Maritime Services Board of New South Wales.* (a) *General.* The Maritime Services Board of New South Wales is a corporate body of five Commissioners, three of whom are full-time members and two, representing shipping and commercial interests, part-time members. The Board was brought into existence on 1st February, 1936 by the Maritime Services Act 1935, in order to co-ordinate the port and navigation services of the State, which had previously been administered by the Sydney Harbour Trust and by the State Department of Navigation.

The Board exercises general control over intra-State shipping, including the survey and certification of vessels, the licensing of harbour craft and the examination and issue of certificates to officers; is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities; imposes and collects rates and charges on goods and vessels; and is vested with the general control and management of the navigable waters and ports within the State.

At the Port of Sydney the Board is also responsible for the provision of adequate wharfrage and channels, and carries out all construction, maintenance and dredging work. At other ports of New South Wales such work is undertaken by the Department of Public Works on behalf of the Board.

(b) *Port of Sydney.* The entrance to Sydney Harbour is nearly a mile wide, and the depth of its navigable channel is not less than 80 feet. Between the entrance, known as "The Heads", and the Harbour proper, a distance of 4 miles, there are two separate channels, each 700 feet wide, the Western Channel not less than 43 feet deep low water ordinary spring tides and the Eastern Channel 40 feet deep. The foreshores, which have been reduced by reclamations, are 152 miles in length and the total area of the port is 13,600 acres, or 21 square miles, of which about one-half has a depth of 30 feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

Excluding ferry wharves and jetties used for private purposes, there are 64,676 feet of wharfrage controlled by the Maritime Services Board and 9,928 feet of commercial wharfrage privately owned. Ferry berths cover 3,427 feet, and the total for all purposes is 78,031 feet. Depth of water at wharves is up to 40 feet. The principal wharves are leased to shipping companies whose vessels engage regularly in the trade of the port; the remainder are reserved for vessels which visit the port occasionally. There is ample shed accommodation for normal demands and the port is well equipped with railway wharfrage for the handling of traffic which is required to pass direct from ship to rail and vice versa. For the wheat export trade, in both bulk and bag, ample wharfrage accommodation and handling equipment of the most modern character are available. Special facilities for the storage and handling of other staple products such as wool, etc., are provided on the waterside, and modern plant has been installed for replenishing ships' bunkers with oil or coal. Facilities in all directions can be very considerably extended when required.

The docking facilities comprise five large graving docks, four floating docks and eight patent slips. The Captain Cook Graving Dock, opened in March, 1945, is capable of accommodating the largest vessel afloat.

The following table shows particulars of the finances of the Board for 1946-47 and 1947-48 in respect of the Port of Sydney:—

MARITIME SERVICES BOARD: FINANCES OF THE PORT OF SYDNEY.

(£.)

Year.	Total Capital Debt.	Revenue.			Expenditure.			Surplus.
		Wharfrage and Tranship- ment Rates.	Tonnage Rates and Berthing Charges.	Total.	Adminis- tration and Mainten- ance.	Interest, Sinking Fund, Exchange, etc.	Total. (a)	
1946-47..	11,097,221	725,903	158,521	1,379,882	702,833	540,240	1,243,073	136,809
1947-48..	11,242,120	759,014	167,406	1,446,779	793,319	530,159	1,323,478	123,301

(a) Excludes capital expenditure: 1946-47—£153,854; 1947-48—£282,345.

(c) *Port of Newcastle.* Newcastle Harbour is administered by the Maritime Services Board and an advisory committee consisting of five members appointed by the Governor. In regard to volume of shipping entered, Newcastle ranks second in importance in New South Wales and third in Australia. It is primarily a coal-loading port, but its activities cover the shipment of general commodities. The wharfrage and other facilities of the port have been further improved and extended to meet the actual and the anticipated growth of trade with the expansion of industry in the district. Facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

Wharfrage accommodation amounts to 19,756 feet, of which the Maritime Services Board controls 6,211 feet, the Railways Department 7,719 feet, and private shipping companies 2,200 feet. Depths of water range from 25 to 28 feet (low water ordinary spring tide).

(d) *Port Kembla.* As from 3rd May, 1948, the Maritime Services Board assumed the administration and navigational control of Port Kembla, which had previously been administered by the New South Wales Department of Public Works. The Department will, however, continue to be the constructing authority in respect of works, dredging and maintenance. In respect of volume of shipping entered Port Kembla ranks third in the ports of New South Wales, and about eighth in those of Australia. It has an area of approximately 330 acres with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfrage accommodation has been provided for large ocean-going vessels. Being adjacent to the southern coalfields and a rapidly developing centre of secondary industries, its trade is growing and a great future for the port is predicted.

(e) *Other Ports.* In addition to the ports of Sydney, Newcastle and Port Kembla, the Board controls 29 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

(ii) *Port Charges.* The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Federal Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Act. Since 1st February, 1936, the State enactments have been administered by the Maritime Services Board. The gross collections by the State authorities amounted to £1,751,000 in 1946-47 and £1,832,000 in 1947-48. These figures include the Port of Sydney revenue (*see* table above) and State navigation service collections (£371,107 in 1946-37 and £385,118 in 1947-48). Commonwealth Government revenue from light dues, navigation receipts, etc. for the whole of Australia amounted to £147,616 in 1946-47 and £175,631 in 1947-48.

2. *Victoria.*—(i) *Melbourne Harbor Trust.* (a) *General.* Information regarding the origin and constitution of this Trust, which controls the Port of Melbourne, appears in Official Year Book No. 12, p. 970 *et seq.* At 31st December, 1948, the sheds available for wharfrage accommodation had a length of 19,606 feet, covering an area of 1,340,888 square feet. The area of water in the bay and River Yarra under the control of the Trust is approximately 5,327 acres and the total length of wharves, piers and jetties in the port is 61,740 feet, giving an area of over 58 acres of wharfrage, and 53,109 feet of effective berthing space. The depths of water (low water ordinary spring tide) of main channels and at principal wharves are about 30 feet, the maximum being about 36 feet.

(b) *Finances.* The following table shows particulars of the financial operations of the Trust during the years 1947 and 1948 :—

MELBOURNE HARBOR TRUST : FINANCES.
(£.)

Year.	Revenue.			Expenditure.				Surplus.
	Gross Loan Indebtedness.	Wharfage and Tonnage Rates.	Total. (a)	Administration and Maintenance.	Interest, Sinking Fund, Exchange, etc.	Depreciation, Renewals and Insurance Account.	Total. (a) (b)	
1947 ..	3,937,709	819,425	1,113,456	399,641	238,084	123,940	944,516	168,940
1948 ..	3,820,203	961,925	1,313,813	471,039	220,463	134,230	1,037,152	276,661

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbour Trust : 1947, £182,851; 1948, £211,420. (b) Excludes capital expenditure : 1947, £375,705 ; 1948, £393,240.

(ii) *Geelong Harbor Trust.* The Geelong Harbor Trust was constituted in 1905, and reconstituted in 1934 under the provisions of the Melbourne and Geelong Harbor Trusts Act 1934. The Trust is under the control of three Commissioners appointed by the Governor-in-Council. Revenue for the years 1947 and 1948 was £116,501 and £132,610 respectively, and revenue expenditure was £87,197 and £112,503. Payments made in respect of capital works amounted to £60,935 in 1947 and to £84,731 in 1948, and loans outstanding at the end of each year amounted to £525,504 and £517,414. Depths of water available in Geelong harbour range from 24 to 29 feet (low water ordinary spring tide).

(iii) *Other Ports.* Portland is the only Victorian port other than Melbourne and Geelong of more than minor importance.

3. *Queensland.*—(i) *General.* The ports of Queensland, except Brisbane and certain minor ports, are administered by Harbour Boards with members representing the towns and districts served by the ports. Brisbane and the minor ports are controlled by the State Treasury through the Department of Harbours and Marine, which supervises the engineering activities of the other ports.

(ii) *Brisbane.* Brisbane accommodates comfortably, in its dredged and improved river, the largest vessels in the Australian trade. The main centres for shipping, although further downstream than formerly, because of the increasing size of vessels, are still within easy access of the city. The maximum depths (low water ordinary spring tide) of the shipping channel decrease from 33 feet in the North-West channel to 18 feet in the Bulimba Reach to Victoria Bridge section. Depths at wharves vary between 24 and 30 feet. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1946-47 and 1947-48 are shown below :—

BRISBANE HARBOUR : FINANCES.
(£'000.)

Year.	Loan Indebtedness.	Revenue.		Expenditure.		Credit Balance.
		Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).	
1946-47 ..	1,163	149	171	133	212	132
1947-48 ..	1,219	153	222	126	209	145

In addition to Brisbane Harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, the Brisbane River, and ten smaller harbours not administered by Harbour Boards.

(iii) *Harbour Boards.* Harbour Boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. Finances for each port for the year 1948 are shown below, and a summary for the year 1947 as well as for 1948.

HARBOUR BOARDS, QUEENSLAND : FINANCES, 1948.

(£.)

Harbour Board.	Loan Indebted- ness.	Revenue.		Expenditure (excluding Loan).		Surplus (+) or Deficit(-).
		Wharf- age and Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Red-emp- tion).	
Bowen	268,531	14,012	16,219	5,648	11,992	+ 4,227
Bundaberg	22,529	4,199	11,830	3,127	10,213	+ 1,617
Cairns	156,351	73,642	100,067	84,837	99,672	+ 395
Gladstone	98,985	8,522	13,470	3,680	7,676	+ 5,794
Mackay	365,883	95,716	105,501	8,557	49,997	+ 55,504
Rockhampton ..	511,721	16,981	26,347	29,384	39,204	- 12,857
Townsville	53,076	67,288	93,553	78,467	145,364	- 46,811
Total, 1948 ..	1,477,076	280,360	371,987	213,700	364,118	+ 7,869
Total, 1947 ..	1,481,213	234,872	328,464	205,572	330,022	- 1,558

4. *South Australia.*—*The South Australian Harbours Board.* All South Australian harbours are controlled by the South Australian Harbours Board, which consists of three commissioners, appointed by the Governor for a period of five years and eligible for re-appointment. The Board is responsible to the Minister of Marine for the discharge of its duties and functions, and controls about 60 ports, but at many of them there is little or no shipping movement. The more important are Adelaide, Augusta, Lincoln, Pirie, Wallaroo and Whyalla. Maximum depths of water (low water ordinary spring tide) at the wharves of these ports range from 20 to 24 feet at Pirie to 35 feet at Adelaide (Outer Harbour). The following table shows the finances of the Board for 1946-47 and 1947-48.

SOUTH AUSTRALIAN HARBOURS BOARD : FINANCES.

(£.)

Year.	Capital Expendi- ture to 30th June.	Revenue.	Expenditure from Revenue.				Surplus.
			Working Expenses.	Interest.	Sinking Fund.	Total.	
1946-47 ..	8,283,775	747,071	341,749	288,833	55,069	685,651	61,420
1947-48 ..	8,367,780	873,059	356,459	281,517	57,585	695,561	177,498

5. *Western Australia.*—(i) *Fremantle Harbour Trust.* Fremantle Harbour is controlled by a board of five commissioners appointed by the Governor-in-Council. Maximum depth of water (low water ordinary spring tide) at the entrance to the harbour is 36 feet, and at the wharves 33 feet. The length of wharf berth accommodation is 10,566 feet.

Gross earnings for the year 1946-47 amounted to £656,357, working expenses to £432,08c, interest, £127,895, sinking fund, £27,804, renewals fund, £2,000, and payment of surplus cash to Consolidated Revenue, £52,844. Corresponding figures for 1947-48 were: £783,215, £495,822, £128,843, £29,300, £2,000 and £105,169. The total amount debited to loan capital account at 30th June, 1948 was £2,902,966.

(ii) *Bunbury Harbour Board.* The Bunbury Harbour Board consists of five members appointed by the Government. The depth of water at the entrance and at the wharf is 27 feet (low water ordinary spring tide). Berthage accommodation is 3,700 feet. Gross earnings in 1946-47 were £21,753, working expenses £35,513 and interest £30,753 (1947-48, £22,818, £34,815, £28,363). The total amount debited to loan capital account at 30th June, 1948 was £718,086.

(iii) *Other Ports.* Only the ports of Fremantle and Bunbury in Western Australia are under the control of trusts, the remainder are Government operated. Of these Albany, Carnarvon and Geraldton have the largest amount of shipping movement.

6. *Tasmania.* There are seven Marine Boards and two Harbour Trusts in Tasmania. The Marine Boards control the ports of Hobart, Launceston, Circular Head, Burnie and Table Cape, Devonport, Strahan, and King Island (Currie), and the Harbour Trusts those of Smithton and Leven. Aggregate receipts of revenue accounts of all these authorities during the year 1946-47 were £242,524 and expenditures, £286,599, including loan charges, £44,659. Corresponding figures for 1947-48 were £305,614, £318,484 and £48,706. The total receipts of the Hobart Marine Board during 1946-47 were £74,500, loan charges £1,148 and total expenditure £83,629. Corresponding figures for 1947-48 were £134,700, £1,189 and £120,580. Launceston Marine Board receipts during 1946-47 amounted to £77,734, loan charges to £9,934 and total expenditure to £77,734. The figures for 1947-48 were, respectively, £70,405, £9,893 and £71,723. Loan indebtedness of all Marine Boards and Trusts at 30th June, 1948 was £787,885, of which £46,561 was in respect of Hobart and £93,281 in respect of Launceston.

Hobart, Launceston, Burnie and Devonport are the principal ports of Tasmania. In addition to their interstate and intra-state traffic there is also considerable overseas shipping. Depths of water at wharves vary, in general, between 16 and 40 feet (low water ordinary spring tide), but at Hobart the Ocean Pier has a depth of water of from 36 to 60 feet.

§ 7. Fire Brigades.

1. *New South Wales.*—(i) *General.* Under the Fire Brigades Act 1909-1949, a Board of Fire Commissioners, consisting of eight members, operates, and 145 fire districts had been constituted at the end of 1948. The cost of maintenance of fire brigades has been borne in proportions of quarter, quarter, and half by the Government, the municipalities, and the insurance companies concerned, the expenditure so regulated that the proportion payable by the councils in a fire district should not, except in special circumstances, exceed the amount obtainable from ¼d. in the £1 rate on the unimproved capital value of ratable land in the fire district. In June, 1949, legislation was introduced (i) increasing the limit of the Board's borrowing power from £250,000 to £500,000, (ii) providing for the varying of the maximum rate that may be levied by councils and (iii) altering the basis of contributions so that from 1st January, 1950 local councils and the Government will each pay one-eighth and the insurance companies three-quarters.

Other legislation introduced in September, 1949 is designed to improve and modernize the law dealing with the prevention of bush fires and to build up the organization of the bush fire-fighting services. Fire Regions will be established and a Bush Fire Fighting Fund created, to be financed from contributions by the Government, councils and insurance companies in the proportion of one-quarter, one-quarter and one-half, respectively. The contribution of any council shall not exceed one-twentieth of a penny in the £1 on the unimproved capital value of ratable land in the area of the council not being land within a fire district constituted under the Fire Brigades Act 1909-1949.

(ii) *Board of Fire Commissioners of New South Wales.* At 31st December, 1948 the authorized strength of the Fire Brigade throughout the fire districts of New South Wales was 300 officers and 823 permanent, 1,967 volunteer, and 1,818 reserve firemen. Corresponding figures for the Sydney Fire District were 221, 772, 289 and 678. The revenue for the year 1948 (figures for the year 1947 in parenthesis) was £834,870 (£755,880), made up as follows:—From the Government, £204,248 (£185,048); municipalities and shires, £204,248 (£185,048); fire insurance companies and firms, £408,496 (£370,096); and from other sources, £17,878 (£15,688). The disbursements for the year were £902,819 (£752,374).

2. *Victoria.*—(i) *General.* The Fire Brigades Act of 1928 provided for a Metropolitan Fire Brigades Board and a Country Fire Brigades Board each consisting of nine members. In December, 1944 the latter Board was superseded by the Country Fire Authority under an Act of that title, and the number of members was increased to ten. The income of each Board is derived in equal proportions from the Treasury, the municipalities and insurance companies.

(ii) *Metropolitan Fire Brigades Board.* On 30th June, 1948 the Board had under its control 42 stations, 348 permanent staff, 180 special service and clerical, etc. staff, and 141 partially-paid firemen. The total receipts for 1947–48 (1946–47 in parenthesis) were £362,103 (£325,758), comprising contributions £269,769 (£242,687), receipts for services £61,388 (£53,867), and interest and sundries £30,946 (£29,204). The expenditure was £342,760 (£327,821).

(iii) *Country Fire Authority.* This authority, constituted in 1944, is responsible for the prevention and suppression of fires in the “country area of Victoria”, which embraces the whole of the State outside the metropolitan fire district, excluding State forests and certain crown lands. The country area has been divided into 24 fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. At 30th June, 1948 there were 170 municipal councils and 121 insurance companies included in the operation of the Act, and 193 urban and 904 rural fire brigades. The effective registered strength of the brigades was 68,343 members.

The receipts for the year 1947–48 (1946–47 in parenthesis) amounted to £114,374 (£94,248). Total expenditure other than loan amounted to £112,347 (£110,378).

3. *Queensland.*—(i) *General.* The Acts of 1920–1931 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows:—The Treasury two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades in a district must be registered.

(ii) *Fire Brigades Boards.* At 30th June, 1948 there were fire brigades in 60 towns. The total number of stations was 91, and full-time staff numbered 404, including 14 administrative, 61 officers and 329 firemen. Workshop staff numbered 22. Part-time staff numbered 401, including 59 administrative, 56 officers and 340 firemen. Volunteers numbered 334. The total revenue for the year 1947–48 (figures for 1946–47 in parenthesis) was £285,296 (£227,326), received mainly from the following sources: Government £71,518 (£60,371), local authorities £71,146 (£60,344), insurance companies £106,818 (£89,309), and loans (Government and other), £17,329 (£5,472). The total expenditure for the year was £270,740 (£235,170), the chief items being salaries and wages £179,032 (£158,426) and interest and redemption of loans, £23,253 (£22,259).

4. *South Australia.*—The Fire Brigades Act 1936–1944 provides for a board of five members, and the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury, five-ninths by insurance companies, and two-ninths by the municipalities concerned. The contribution of the Treasury, however, is limited to £10,000 and if two-ninths of the expenses and maintenance exceeds this amount, five-sevenths of the excess is contributed by the insurance companies and two-sevenths by the municipalities. At 30th June, 1948 there were altogether 33 fire brigade stations,

and the authorized strength of the permanent staff was 285, including 191 officers and men and 77 country auxiliary firemen. The total revenue for the years 1946-47 and 1947-48 was £104,850 and £114,471 respectively.

5. **Western Australia.**—Under the 1942 Act certain Municipal and Road Board Districts are constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 27 at 30th June, 1948. The income of the Board is derived in the proportion of two-ninths from the Government, two-ninths from Local Government Authorities, and five-ninths from insurance companies. The brigades throughout the State controlled by the Western Australian Fire Brigades Board number 43, with a staff of 1,164, including 207 permanent officers and firemen and 942 volunteer brigade officers and firemen. The revenue for the year ended 30th September, 1947 was £118,818 and the expenditure £111,112. Corresponding figures for the year ended September, 1948 are £118,468 and £120,500.

6. **Tasmania.**—The Fire Brigades Act 1945 provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of the 22 existing Fire Brigades Boards, while leaving the responsibility for individual control and management with the Boards. The Commission consists of five members nominated or elected by the Fire Brigades Boards and one member nominated by the Minister. Contributions towards the cost of operations remain on the old basis of one-third each from the Treasury, the municipalities and the insurance companies concerned. The cost for the year 1946-47 amounted to £24,703 and for 1947-48 to £30,795. There were at 30th June, 1948 26 stations amongst the 22 brigades, and their aggregate staffs numbered 345, including 45 permanent officers and 277 partially-paid firemen including officers.

CHAPTER XVI.

PRIVATE FINANCE.

NOTE.—This chapter, for convenience, has been sub-divided into six sections as follows :—

Currency; Banking, including Savings Banks; Companies; Insurance;
Friendly Societies; and Probates and Letters of Administration.

A. CURRENCY.

§ 1. General.

The Australian monetary system is based on the British system of which the unit is the pound (£) divided into 20 shillings (s.) each of 12 pence (d.). When the Australian currency was introduced in 1909 the Australian sovereign was identical in weight and fineness with the English sovereign. As the currency was then based on a gold standard the Australian pound was equivalent to the sovereign (i.e. 123.27447 grains of gold $11\frac{1}{12}$ ths fine or 113.002 grains of fine gold) and, until the depression in 1930, was generally regarded as identical with the pound sterling. There was a gradual depreciation of the Australian pound in terms of sterling from the beginning of 1930 until 3rd December, 1931, when it was stabilized at the rate of £125 Australian = £100 sterling. This relationship has been maintained until the present time. Following the depreciation, no action was taken to define the value of the Australian pound in terms of gold until 5th August, 1947, when the Australian Government advised the International Monetary Fund, in terms of the agreement, that the par value of the Australian pound was 2.86507 grammes (44.2148 grains) of fine gold. From 19th September, 1949 this was reduced to 1.99062 grammes (30.720 grains) of fine gold.

When the Commonwealth was established in 1901, the currency in Australia consisted of United Kingdom gold, silver and bronze coins, bank notes issued by the trading banks, and Queensland Treasury notes. Queensland Treasury notes were in circulation in Queensland only, having superseded bank notes in that State after the 1893 crisis. Under the Commonwealth Constitution the control of currency, coinage and legal tender and the issue of paper money were vested in the Commonwealth. The Commonwealth assumed these powers by enacting the Coinage Act 1909 and the Australian Notes Act 1910.

§ 2. Coinage.

1. **Coins in Circulation.**—Brief historical notes relating to the Australian Coinage are given in Official Year Book No. 37, pages 557 and 558. Coins at present in circulation are :—

Silver—Crown (5s.), florin (2s.), shilling (1s.), sixpence (6d.) and threepence (3d.).
Bronze—Penny and half-penny.

The silver coins issued prior to July, 1947 have a millesimal fineness of 925 (thirty-seven fortieths silver and three fortieths alloy) and those issued after 1st July, 1947 have a millesimal fineness of 500 (one half silver and one half alloy). Details of the standard weight and fineness of Australian coins are given in earlier issues of the Official Year Book (*see* No. 37, page 558).

From 1910 to 1916 Australian coins were minted in England by the Royal Mint, London. From 1916 they were minted at the Melbourne Branch of the Royal Mint. During and since the 1939–45 War the Melbourne Mint has been unable to meet the

demand for Australian coins and some coins have been minted at the Perth Mint and at mints in the United States of America and India. Details of Australian coins obtained from mints outside Australia from 1910 onward are given in the following table:—

AUSTRALIAN COINS OBTAINED FROM MINTS OUTSIDE AUSTRALIA.
(£.)

Locality.	Florin. 2s.	Shilling. 1s.	Six- pence. 6d.	Three- pence. 3d.	Penny. 1d.	Half- penny. ½d.	Total.
United Kingdom—							
London	869,900	575,100	210,000	185,000	53,700	22,400	1,916,100
India—							
Calcutta .. ..	..	..	..	..	46,500	22,500	69,000
Bombay .. ..	..	..	..	..	75,000	25,000	100,000
United States of America—							
San Francisco ..	2,800,000	1,400,000	325,000	600,000	..	..	5,125,000
Denver .. ..	..	..	475,000	400,000	..	..	875,000
Total	3,669,900	1,975,100	1,010,000	1,185,000	175,200	69,900	8,085,100

2. Issues of Australian Coins.—The total issues and withdrawals of Australian silver and bronze coinage on account of the Commonwealth since 1910 are set out in the following table:—

AUSTRALIAN COINS: SILVER AND BRONZE COIN ISSUED AND WITHDRAWN.
(£.)

Year.	Silver.						Bronze.		
	Crown. 5s.	Florin. 2s.	Shilling. 1s.	Sixpence. 6d.	Three- pence. 3d.	Total.	Penny. 1d.	Half- penny. ½d.	Total.
Issued—									
1910 to									
1939 ..	275,000	4,968,300	2,070,900	1,115,800	1,076,900	9,506,900	484,443	172,905	657,348
1939-40..	600	176,800	36,800	41,600	50,600	306,400	20,770	5,280	26,050
1940-41..	..	1,161,000	83,400	66,800	83,200	1,394,400	45,820	7,600	53,420
1941-42..	..	1,505,800	69,000	53,000	64,400	1,692,200	57,230	20,270	77,500
1942-43..	..	3,090,600	781,000	724,200	439,400	5,035,200	126,380	25,100	151,480
1943-44..	..	2,615,000	650,000	200,000	759,400	4,224,400	209,210	77,800	284,010
1944-45..	..	1,343,000	978,800	352,400	150,000	2,824,200	96,340	1,500	97,840
1945-46..	..	1,473,400	..	..	..	1,473,400	30,170	25,310	55,480
1946-47..	..	..	..	..	..	..	7,470	22,710	30,180
1947-48..	..	5,120,200	557,000	250,600	216,400	6,144,200	74,330	31,290	105,620
1948-49..	..	820,000	219,000	195,600	239,300	1,473,800	113,350	52,610	165,960
Total ..	275,600	22,274,100	5,445,900	3,000,000	3,079,500	34,075,100	1,260,513	442,375	1,702,888
Withdrawn—									
1910 to									
1947 (a) ..	..	2,200	1,800	..	..	53,106 (b)	3,368	(c)	3,368
1947-48(d) ..	..	2,830,000	509,800	35,200	..	3,377,640 (b)	157	(c)	157
1948-49(e) ..	..	817,620	410	140	133	818,397	126	19	145
Total ..	..	3,649,820	512,010	35,340	133	4,249,143	3,651	19	3,670
Net Issues to 30th June, 1949	275,600	18,624,280	4,933,890	2,964,660	3,079,367	29,825,957	1,256,862	442,356	1,699,218

(a) Total Silver Coin includes £49,106 for which denominations are not available. (b) Includes half-pence. (c) Included with pence. (d) Total Silver Coin includes £2,640 for which denominations are not available. (e) Total Silver Coin includes £94 for which denominations are not available.

Coin withdrawn during 1947-48 and 1948-49 includes a considerable quantity of silver coin withdrawn for recoinage.

3. **Legal Tender.**—Imperial gold coins of the specified weight and fineness are legal tender in Australia for any amount. Australian silver coins are legal tender for any amount not exceeding forty shillings and Australian bronze coins are legal tender for any amount not exceeding one shilling.

4. **Profits on Coinage of Silver and Bronze.**—Australian silver and bronze coins are token coins and, as the face value of the coins is greater than the value of the bullion they contain, a profit is made from their issue. This profit forms part of the Commonwealth Consolidated Revenue. In the following table details are given of the value of coins issued, the cost of bullion, the cost of minting and sundry expenses connected with the issue, and the profits made on the issue of coins during the years 1938-39 and 1944-45 to 1948-49.

AUSTRALIAN SILVER AND BRONZE COINS: PROFITS FROM ISSUE.

(£.)

Year.	Coin Issued.	Cost of Bullion.	Loss on Coin Withdrawn. (a)	Gross Profit.	Cost of Minting and Sundry Charges.	Net Profit.
SILVER COIN.						
1938-39 ..	219,600	81,314	(b)	138,286	18,459	119,827
1944-45 ..	2,824,200	1,301,228	(b)	1,522,972	224,617	1,298,355
1945-46 ..	1,473,400	776,810	(b)	696,590	100,906	595,684
1946-47(c) ..	..	..	(b)	..	245,051	-245,051
1947-48 ..	6,144,200	2,681,284	961,679	2,501,237	114,638	2,386,599
1948-49 ..	1,473,800	545,868	183,941	743,991	78,856	665,135
BRONZE COIN.						
1938-39 ..	41,800	7,838	(b)	33,962	26,025	7,937
1944-45 ..	97,840	23,362	(b)	74,478	65,796	8,682
1945-46 ..	55,480	14,393	(b)	41,087	32,172	8,915
1946-47 ..	30,180	7,714	(b)	22,466	27,332	-4,866
1947-48 ..	103,620	35,868	107	67,645	67,518	127
1948-49 ..	165,960	58,404	90	107,466	132,766	-25,300
TOTAL.						
1938-39 ..	261,400	89,152	(b)	172,248	44,484	127,764
1944-45 ..	2,922,040	1,324,590	(b)	1,597,450	290,413	1,307,037
1945-46 ..	1,528,880	791,203	(b)	737,677	133,078	604,599
1946-47(c) ..	30,180	7,714	(b)	22,466	27,332	-249,917
1947-48 ..	6,247,820	2,717,152	961,786	2,568,882	182,156	2,386,726
1948-49 ..	1,630,760	604,272	184,031	851,457	211,622	639,835

(a) Face value of coin less value of bullion recovered. (b) Included with cost of minting and sundry charges. (c) During 1946-47 a considerable quantity of new silver coin was minted but not issued until 1947-48. The cost of minting this coin is included and consequently a loss resulted.

NOTE.—Minus sign (—) denotes loss.

5. **Australian Mints.**—(i) *General.* Soon after the discovery of gold in Australia a branch of the Royal Mint was established in Sydney. The formal opening took place on 14th May, 1855. The Melbourne branch was opened on 12th June, 1872, and the Perth branch on 20th June, 1899. The States of New South Wales, Victoria and Western Australia provided an annual endowment in return for which the mint receipts were paid into the respective State Treasuries. Owing to losses incurred in its operations, the Sydney branch was closed at the end of 1926.

Since their establishment, the Australian branches of the Royal Mint have been primarily concerned with the refining of gold, minting of Imperial gold coins and the production of bars and ingots of gold bullion for export. The minting of Imperial gold coins was discontinued in September, 1931. In 1916 the Melbourne branch took over from the Royal Mint, London, the minting of Australian silver and bronze coins, and during the 1939-45 War the Perth branch commenced minting Australian coins. The Melbourne branch has also minted token coins for the Territory of New Guinea and for New Zealand.

(ii) *Gold Receipts and Issues.* (a) *Receipts.* The receipts of gold during 1947, 1948 and 1949 and the aggregate at each mint to the end of 1949 were as follows :—

AUSTRALIAN MINTS : RECEIPTS OF GOLD.

Mint.	Deposits during year (Oz.)—			Total to end of 1949.		
				Quantity (Oz.)		Value(£).(b)
	1947.	1948.	1949.	Gross.	Fine.	
Sydney(a)	..	..	..	42,082,928	36,907,045	156,771,141
Melbourne..	265,625	231,228	284,422	47,511,740	42,322,931	179,776,270
Perth ..	1,032,388	920,418	899,269	52,057,351	41,278,133	175,338,249
Total	1,298,013	1,151,646	1,183,691	141,652,019	120,508,109	511,885,660

(a) To end of 1926, when the mint was closed.

(b) At £3 17s. 10½d. per standard ounce.

(b) *Issues.* The Australian mints issue gold bullion for the use of local manufacturers (jewellers, dentists, etc), and for export. Since September, 1931, when the United Kingdom departed from the gold standard, the minting of gold coins by Australian mints has ceased. Australian exports of gold are mainly in the form of 400-oz. ingots, but in earlier years a considerable amount of gold was shipped in 10-oz. bars to India. Since early in the 1939-45 War all gold has been acquired by the Commonwealth Bank and the export and use of gold has been subject to regulation by the Commonwealth Government. The issues during the years 1947 to 1949, and the total to the end of 1949, are shown in the table below :—

AUSTRALIAN MINTS : ISSUES OF GOLD.

(£.)

Mint.	Coin.			Bullion.(a)	Total.
	Sovereigns.	Half-sovereigns.	Total.		
1947—					
Melbourne ..	..	..	..	644,667	644,667
Perth ..	..	..	..	3,120,154	3,120,154
Total, 1947	..	..	..	3,764,821	3,764,821
1948—					
Melbourne ..	..	..	..	603,085	603,085
Perth ..	..	..	..	2,799,680	2,799,680
Total, 1948	..	..	..	3,402,765	3,402,765
1949—					
Melbourne ..	..	..	..	603,929	603,929
Perth ..	..	..	..	2,770,360	2,770,360
Total, 1949	..	..	..	3,374,289	3,374,289
Aggregate—					
Sydney ..	144,435,550	4,781,000	149,216,550	7,574,408	156,790,958
Melbourne ..	147,283,131	946,780	148,229,911	31,539,186	179,769,097
Perth ..	106,384,197	367,338	106,751,535	68,618,155	175,369,690
Total to end of 1949 ..	398,102,878	6,095,118	404,197,996	107,731,749	511,929,745

(a) Value expressed at £3 17s. 10½d. per standard ounce.

6. **Price of Gold.**—The following table shows the average prices of gold and the average value of the sovereign in London and Australia for the years 1938-39 to 1948-49. The average price of gold in Australia is based on the Commonwealth Bank's buying price for gold lodged with the mints.

PRICE OF GOLD : LONDON AND AUSTRALIA.

Period.	London.		Australia.			
	Average price per fine oz.	Average value of Sovereign.	Average price per fine oz.	Sovereign.		
				Average value.	Equivalent to a premium of—	
	£stg. s. d.	£stg. s. d.	£A. s. d.	£A. s. d.	%	
1938-39 ..	7 6 9	1 14 7	9 2 9	2 3 0	115.0	
1939-40 ..	8 4 10	1 18 8	10 8 4	2 9 1	145.4	
1940-41 ..	8 8 0	1 19 7	10 13 5	2 9 2	145.8	
1941-42 ..	8 8 0	1 19 7	10 11 4	2 8 7	142.9	
1942-43 ..	8 8 0	1 19 7	10 9 0	2 8 0	140.0	
1943-44 ..	8 8 0	1 19 7	10 9 0	2 8 0	140.0	
1944-45 ..	8 8 3	1 19 7	10 11 10	2 8 9	143.8	
1945-46 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0	
1946-47 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0	
1947-48 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0	
1948-49 ..	8 12 3	2 0 7	10 15 3	2 10 0	150.0	

From 19th September, 1949, when sterling was devalued, the price of gold in London was increased from £8 12s. 3d. per fine ounce to £12 8s. per fine ounce. The price of gold in Australia was increased from £10 15s. 3d. per fine ounce to £15 9s. 10d. per fine ounce. The value of the sovereign increased from £2 os. 7d. to £2 18s. 5d. in London and from £2 10s. to £3 12s. in Australia.

§ 3. Notes.

1. **General.**—Brief historical notes relating to the circulation and issue of notes in Australia are given in Official Year Book No. 37, pages 501 and 502. The issue of notes, intended for circulation as money, by any person, bank or State other than by the Commonwealth Bank is prohibited.

2. **The Australian Note Issue.**—(i) *General.* Notes in circulation in Australia are issued by the Commonwealth Bank through the Note Issue Department. The Bank is authorized to issue Australian notes in denominations of 5s. 10s., £1, £5, £10 and any multiple of £10. The Commonwealth Bank is not required to hold a specific reserve in gold against the note issue, but the assets of the Note Issue Department must be held or invested in gold, on deposit with any bank or in securities of the Government of the United Kingdom, the Commonwealth or a State. All profits of the Note Issue Department, with the exception of £150,000 per annum paid to the Mortgage Bank Department of the Commonwealth Bank, are paid to the Commonwealth Consolidated Revenue Fund. The payment of the amount of £150,000 per annum to the Mortgage Bank Department will cease when the capital of that Department is £4,000,000.

Australian notes are legal tender to any amount within Australia and have been issued in denominations of 10s., £1, £5, £10, £20, £50, £100 and £1,000.

(ii) *Australian Notes in Circulation.* Particulars of the average values of notes in circulation for the years 1938-39 and 1944-45 to 1948-49 are given in the following table:—

AUSTRALIAN NOTE ISSUE.
(£'000.)

Denomination.	Average of monthly statements for year—					
	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
10s.	4,141	8,177	8,187	7,912	8,268	8,309
£1	21,124	65,207	74,170	68,161	65,356	64,710
£5	11,718	71,745	77,327	78,814	77,663	81,170
£10	5,126	39,280	32,250	44,004	46,216	49,438
£20	111	43	11	9	8	8
£50	1,259	3,616	176	103	85	76
£100	2,238	4,761	273	183	163	139
£1,000	2,855	894	424	453	547	505
Held by Banks	15,454	16,669	17,077	18,895	22,296	24,831
Held by Public	33,118	177,054	175,741	180,744	176,010	179,524
Total	48,572	193,723	192,818	199,639	198,306	204,355

(iii) *Commonwealth Bank—Note Issue Department.* The following statement shows particulars of liabilities and assets of the Note Issue Department of the Commonwealth Bank as at 30th June, 1948 and 1949.

NOTE ISSUE DEPARTMENT.
(£'000.)

Liabilities.	30th June—		Assets.	30th June—	
	1948.	1949.		1948.	1949.
Notes on Issue(a) . .	196,605	212,813	Gold and Balances held abroad (including money at short call) . .	50,880	50,880
Special Reserve—Premium on gold sold	4,755	4,755	Government Securities (including Commonwealth Treasury Bills)	152,595	168,878
Other Liabilities(a) . .	2,177	2,282	Other Assets . .	62	92
Total Liabilities . .	203,537	219,850	Total Assets . .	203,537	219,850

(a) Notes of a denomination not exceeding one pound which have been on issue for more than twenty years, and notes of a denomination exceeding one pound which have been on issue for more than 40 years are not included in the item "Notes on Issue" but are included in the item "Other Liabilities".

Until the end of 1943 all the net profits of the Note Issue Department, except £2,000,000 paid between 1926 and 1933 to the capital account of the Rural Credits Department, were paid to the Commonwealth Treasury. The Commonwealth Bank Act amendment of 1943 which established a Mortgage Bank Department provided for the transfer of £1,000,000 from the Special Reserve and for an annual payment of £150,000 from the Note Issue profits towards the capital of the new department, the latter payments to cease when the capital amounts to £4,000,000. In 1947-48 the net profits of the Note Issue Department amounted to £4,237,000, of which £4,087,000 was paid to the Commonwealth Treasury and £150,000 to the capital account of the Mortgage Bank Department. In 1948-49 the net profits amounted to £4,610,000 of which £4,460,000 was paid to the Commonwealth Treasury and £150,000 to the capital account of the Mortgage Bank Department.

§ 4. Legal Tender Extant.

Accurate information regarding the amount of legal tender in circulation is not available, but the following table provides an estimate of the amount of legal tender extant about the middle of the years 1939 and 1945 to 1949.

ESTIMATED LEGAL TENDER EXTANT : AUSTRALIA.
(£'000.)

Particulars.	1939. (a)	1945. (a)	1946. (a)	1947.	1948.	1949.
Australian Notes(b)—						
Held by Banks ..	14,829	15,934	17,291	19,937	22,766	23,744
Held by Public ..	32,701	169,810	181,673	183,643	173,839	189,111
Coin(c)—						
Gold(d)—Held by Banks(e)	79	59	78	81	82	86
Held by Public	..	..	..	..	..	..
Silver—Held by Banks(e)	2,508	4,340	6,077	5,168	6,720	6,803
Held by Public ..	6,830	20,496	20,235	21,058	22,236	22,712
Bronze—Held by Banks(e)	132	225	189	169	162	143
Held by Public	521	1,123	1,214	1,260	1,371	1,556
Total	57,600	211,987	226,757	230,416	227,176	244,155

(a) Prior to 1947 withdrawals of coin were negligible and no allowance has been made for coin withdrawn in the estimates for the years 1939, 1945 and 1946. (b) Last Monday in June to 1946. Last Wednesday in June thereafter. (c) See paragraph below. No allowance has been made for coin lost or destroyed, which, during the war years, may have been considerable. (d) Value—one sovereign equals £1. (e) At 30th June.

The figures given above for silver coin represent the total issues of Australian silver coin less the excess of exports of Australian coins over the reimports of Australian coins. The amount of English coin in circulation in Australia is negligible, and, as it is not possible to ascertain accurately its volume, no allowance has been made for it. The figures given for bronze coins refer to the total issues of Australian coin, the small amount of United Kingdom coin in circulation being disregarded.

B. BANKING.

§ 1. Cheque-Paying Banks.

1. Banking Legislation.—(i) *Commonwealth Legislation.* (a) *General.* Under Section 51 of the Commonwealth Constitution the Commonwealth Parliament has power to legislate with respect to “Banking, other than State banking, also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money”. The principal Commonwealth Acts at present in force relating to Banking are—

- (a) The Commonwealth Bank Act 1945 which replaced the Commonwealth Bank Act 1911–1943, and provides for the constitution and management of the Commonwealth Bank and Commonwealth Savings Bank and the management of the Australian note issue;
- (b) The Banking Act 1945, which provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth; and
- (c) The Banking Act 1947, which provides for the expansion of the banking business of the Commonwealth Bank; the taking over, by the Commonwealth Bank, of the banking business in Australia of the private banks, and the acquisition of property used in that business; and the prohibition of private banks carrying on banking business in Australia.

(b) *The Banking Act 1945.* The Banking Act 1945 was assented to on 3rd August, 1945, and came into operation on 21st August, 1945. It applies to all banks except State banks operating in Australia or Territories of the Commonwealth. The objects of the Act are:—(a) To provide a legal framework, uniform throughout Australia, for regulating the banking system; (b) to safeguard depositors of the banks from loss; (c) to provide for the co-ordination of banking policy under the direction of the Commonwealth Bank; (d) to control the volume of credit in circulation and bank interest rates; (e) to mobilize and to provide machinery for the control of the foreign exchange and gold resources of the Australian economy. A summary of the main provisions of the Act is given in Official Year Book No. 37, page 565.

(c) *The Banking Act 1947.* This Act, which was assented to on 27th November, 1947, provided for the acquisition by the Commonwealth Bank of the Australian business and assets of the private banks operating in Australia, and for the prohibition of private banks from carrying on banking business in Australia. The Act did not apply to State banks or savings banks. For a summary of the main provisions of the Act see Official Year Book No. 37, pages 566 and 567.

The validity of this Act was challenged in the High Court by the private banks and the States of Victoria, South Australia and Western Australia, and, in a majority judgment delivered on 11th August, 1948, the Court held that certain vital sections were invalid. An appeal to the Privy Council against part of this judgment was dismissed.

(ii) *State Legislation.* State banking legislation relates to the incorporation of banks and the constitution and management of State banks. The Acts under which the various banks are incorporated differ. While some of the older banks were incorporated by special Act or Charter, e.g., the Bank of New South Wales by Act of Council 1817, the Bank of Australasia by Royal Charter, the Bank of Adelaide by Act of the South Australian Parliament, and the Bank of New Zealand by Act of the General Assembly of New Zealand, most of the banks are incorporated under a Companies Act of the States or the United Kingdom. This is also the case with those banks which were reconstructed after the crisis of 1893. State banks constituted under State Acts transacting general banking business are the Rural Bank of New South Wales, the State Bank of South Australia and the Rural and Industries Bank of Western Australia.

2. *Royal Commission on Monetary and Banking Systems.*—A Royal Commission was appointed by the Commonwealth Government in November, 1935 to inquire into the monetary and banking systems in operation in Australia and to report whether any, and if so what, alterations were desirable in the interests of the people of Australia as a whole, and the manner in which any such alterations should be effected. The Commission presented its report on 15th July, 1937, and a summary of the recommendations appears in Official Year Book No. 31, p. 1010.

3. *Presentation of Banking Statistics.*—Because of the different purposes they serve in the Australian financial system Australian cheque-paying banks have for statistical purposes been divided into three groups and a separate series is presented for each of these groups. These groups are:—

(a) *The Commonwealth Bank.* This is the Central Bank. It also transacts general banking business through a General Banking Division and provides special banking facilities through the Rural Credits, Mortgage Bank and Industrial Finance Departments. Statistics of the Central Banking Business (including the Note Issue Department) and the General Banking Division and Rural Credits, Mortgage Bank and Industrial Finance Departments are presented in separate series.

(b) *Nine Trading Banks.* With the General Banking Division of the Commonwealth Bank these banks provide the major part of the general banking facilities in Australia. The banks included in this group are—The Bank of New South Wales, The Commercial Banking Company of Sydney Ltd., The National Bank of Australasia Ltd., The Commercial Bank of Australia Ltd., The Queensland National Bank Ltd. (in voluntary liquidation), The Bank of Adelaide, The Bank of Australasia, The Union Bank of Australia Ltd., and The English, Scottish and Australian Bank Ltd.

- (c) *Other Banks.* This group consists of (i) three State Government Banks—The Rural Bank of New South Wales, The State Bank of South Australia and the Rural and Industries Bank of Western Australia which, in their general banking business, specialize mainly in financing rural industries, (ii) two joint stock banks—The Ballarat Banking Co. Ltd. and The Brisbane Permanent Building and Banking Co. Ltd. which have specialized business in two districts only, and (iii) branches of three overseas banks—The Bank of New Zealand, Comptoir National D'Escompte de Paris and the Bank of China which transact limited business in Australia and are mainly concerned with financing trade, etc., between Australia and overseas countries.

In addition to the series mentioned above, a series for all cheque-paying banks is presented. This series covers the General Banking Division and Rural Credits, Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank, the Nine Trading Banks and the other cheque-paying banks included in the third group.

Unless otherwise stated, the statistics presented are averages of weekly returns. Averages of liabilities and assets are the averages of the liabilities and assets of the banks on the several weekly balance days during the period concerned. Averages of bank clearings and debits to customers' accounts are the averages of transactions for weeks ended on the balance days during the period.

Until December, 1946 these balance days were the Mondays of each week. From January, 1947 Wednesday became the weekly balance day.

Under the Banking Act 1945 the returns furnished by cheque-paying banks were slightly modified and the figures quoted in the following pages may not in all cases be strictly comparable with those quoted in earlier issues of the Official Year Book. The main changes relate to the classification of assets and liabilities. Under the Commonwealth Bank Act 1945 the Commonwealth Bank was reorganized and figures quoted for this Bank are not comparable with those published in issues of the Official Year Book prior to No. 37.

4. *Banks Transacting Business in Australia.*—(i) *Number of Branches.* At 30th June, 1949 the 18 banks operating in Australia transacted all classes of banking business at 2,871 branches and 978 agencies. The Commonwealth Bank of Australia and the Nine Trading Banks have branches throughout the Commonwealth. The Rural Bank of New South Wales, State Bank of South Australia and Rural and Industries Bank of Western Australia, being State Government banks specializing mainly in financing rural industries, have branches only in those States. Two banks, the Ballarat Banking Company Ltd. and the Brisbane Permanent Building and Banking Co. Ltd., transact business only in Ballarat and Brisbane respectively. The remaining three banks are branches of overseas banks.

CHEQUE-PAYING BANKS: NUMBER OF BRANCHES(a) AT 30th JUNE, 1949.

Banks.	New South Wales.	Vic-toria.	Q'land.	South Aust.	West. Aust.	Tas-mania.	Nor. Terr.	Aust. Cap. Terr.	Total.
Commonwealth Bank of Australia ..	242	45	59	15	42	5	2	1	411
Nine Trading Banks ..	806	682	383	214	174	55	5	5	2,324
Other Cheque-paying Banks ..	85	4	1	19	27	..	..	..	136
All Cheque-paying Banks—									
Metropolitan areas ..	415	311	74	68	76	10	..	..	954
Elsewhere ..	718	420	369	180	167	50	7	6	1,917
Total ..	1,133	731	443	248	243	60	7	6	2,871

(a) Includes Head Offices. Excludes agencies, 978.

(ii) *Capital Resources, etc.* The paid-up capital of cheque-paying banks (excluding the three oversea banks, the Bank of New Zealand, the Bank of China and the Comptoir National D'Escompte de Paris), together with their reserve funds, their profits and the amount of their last dividends are shown in the following table. The information relates to the balance-sheet last preceding 31st October, 1949.

CHEQUE-PAYING BANKS : CAPITAL RESOURCES, 1948-49.

(£.)

Bank.	Paid-up Capital.	Reserves.	Balance on Profit and Loss Account. (a)	Total Shareholders' Funds.	Reserve Liability of Shareholders.(b)	Profits for year.	Net Dividends. (c)
Australian Joint Stock Banks—							
Bank of New South Wales ..	8,780,000	6,150,000	671,873	15,601,873	8,780,000	760,740	702,400
Commercial Banking Co. of Sydney Ltd.	4,739,012	4,300,000	354,515	9,393,527	4,739,013	411,797	379,121
National Bank of Australasia Ltd.(d) ..	6,726,025	5,000,000	431,913	12,157,938	1,800,000	540,134	470,821
Commercial Bank of Australia Ltd. ..	4,117,350	2,250,000	268,189	6,635,539	..	320,635	284,694
Ballarat Banking Co. Ltd. ..	159,000	149,000	11,296	319,296	141,000	15,596	10,335
Queensland National Bank Ltd. (in vol. liq.) (d) ..	..	(e) 812	78,750	79,562	..	39	..
Brisbane Permanent Building and Banking Co. Ltd. ..	750,000	250,000	38,466	1,038,466	..	54,887	52,500
Bank of Adelaide ..	1,250,000	1,250,000	113,911	2,613,911	1,250,000	101,675	100,000
Bank of Australasia	4,500,000	4,500,000	653,036	9,653,036	4,500,000	349,254	279,551
Union Bank of Australia Ltd. ..	4,000,000	77,106,751	528,415	11,635,166	8,000,000	320,108	248,490
English, Scottish and Australian Bank Ltd. ..	3,765,000	2,277,825	636,584	6,679,409	2,510,000	298,647	207,075
Total Australian Joint Stock Banks ..	38,786,387	33,234,388	3,786,981	75,807,756	31,720,013	3,173,512	2,734,987
Other Cheque-paying Banks—							
Commonwealth Bank of Australia—							
Central Banking Business ..	4,000,000	1,180,766	..	5,180,766	..	975,156	..
Note Issue Department ..	..	94,754,954	..	4,754,954	..	4,609,903	..
General .. Banking Division ..	4,000,000	739,834	..	4,739,834	..	418,587	..
Rural Credits Department ..	2,000,000	516,886	..	2,516,886	..	38,792	..
Mortgage Bank Department ..	3,161,176	129,678	..	3,290,854	..	36,307	..
Industrial Finance Department ..	4,000,000	252,135	..	4,252,135	..	165,453	..
Total ..	17,161,176	7,574,253	..	24,735,429	..	6,244,198	..
Rural Bank of New South Wales, General Bank Department ..	19,933,022	16,145,975	..	26,078,997	..	79,684	..
State Bank of South Australia ..	1,259,078	660,381	..	1,919,459	..	52,307	..
Rural and Industries Bank of Western Australia (Rural Department) ..	5,479,261	65,635	..	5,544,896	..	19,116	..

(a) Includes dividends declared but not paid at date of balance-sheet. (b) Includes uncalled capital. (c) Dividends paid and payable out of profits earned during 1948-49. (d) The business of the Queensland National Bank Ltd. was taken over by the National Bank of Australasia Ltd. in January, 1948.

(e) Surplus of assets due to valuation of liabilities and assets in Australian currency. (f) Includes £2,256,751 surplus of assets due to valuation of liabilities and assets in Australian currency.

(g) Special Reserve—Premium on gold sold. (h) Total stocks and debentures issued including liability in respect of deposits taken over by the Commonwealth Bank in December, 1931.

(i) Includes £3,754,665 Special Reserve Account established under Section 12 (2) of Rural Bank of New South Wales Act 1932.

NOTE.—In the table all items other than paid-up capital and reserve funds of the Bank of Australasia and the Union Bank of Australia Ltd. are in Australian currency.

5. *Commonwealth Bank.*—(i) *General.* An account of the progress and development of the Commonwealth Bank is given in earlier issues of the Official Year Book (see No. 37, pages 570 to 573). The general functions of the Bank are set out in section 8 of the Commonwealth Bank Act 1945 which states—

“8. It shall be the duty of the Commonwealth Bank, within the limits of its powers, to pursue a monetary and banking policy directed to the greatest advantage of the people of Australia, and to exercise its powers under this Act and the Banking Act 1945 in such a manner as, in the opinion of the Bank, will best contribute to:—

(a) the stability of the currency of Australia; (b) the maintenance of full employment in Australia; and (c) the economic prosperity and welfare of the people of Australia.”

In addition to its functions as a Central Bank, the Bank controls the Australian note issue through a Note Issue Department and provides general banking facilities through a General Banking Division and special services through the Rural Credits Department, Mortgage Bank Department and Industrial Finance Department. The Commonwealth Savings Bank, a separate institution providing for small depositors, is controlled by the Governor of the Commonwealth Bank and is operated in conjunction with the Commonwealth Bank.

(ii) *Management.* The Bank is managed by a Governor who is assisted by an Advisory Council consisting of the Secretary to the Department of the Treasury, the Deputy Governor of the Bank, an additional representative of the Department of the Treasury and two officers of the Bank. The Advisory Council advises the Governor with respect to the monetary and banking policy of the Bank and such other matters as the Governor refers to it.

(iii) *Central Banking Business.* Under the powers it possessed under the Commonwealth Bank Act 1911–1943 and under its war-time powers under the National Security Regulations, the Commonwealth Bank had gradually assumed the functions of a Central Bank. Part III. of the Commonwealth Bank Act 1945 formally constituted the Commonwealth Bank as a Central Bank and granted the Bank the necessary powers to carry on the business of a Central Bank. The capital for the Central Banking Business is £4,000,000 and such other sums as are transferred from the Reserve Fund. The profits of the Central Banking Business are distributed as follows:—(a) One quarter to be placed to the credit of the Commonwealth Bank Reserve Fund; (b) one-quarter to be paid to the Mortgage Bank Department Capital Account; (c) one-half to be paid to the National Debt Sinking Fund. When the capital of the Mortgage Bank Department has reached £4,000,000 the share of profits payable to that department will be credited to the Commonwealth Bank Reserve Fund.

(iv) *Note Issue Department.* This department was established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank. The Bank may, through this department, issue, re-issue and cancel Australian notes. All profits of this department, with the exception of £150,000 per annum paid to the Mortgage Bank Department, are paid to Commonwealth Consolidated Revenue.

(v) *General Banking Division.* Under the Commonwealth Bank Act 1911–1943, no provision was made for the separation of the general banking business of the bank from its central banking business. Under the Commonwealth Bank Act 1945 the General Banking Division was set up to carry on the general banking business of the Bank. The

accounts and transactions of this division are kept separate and distinct from the other accounts of the Bank. The capital of the General Banking Division is £4,000,000, and such other sums as are transferred from the General Banking Division Reserve Fund. The profits of the General Banking Division are distributed as follows :—(a) one half to be placed to the credit of the General Banking Division Reserve Fund, and (b) one half to be paid to the National Debt Sinking Fund.

(vi) *Rural Credits Department.* The Rural Credits Department was established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce. The Bank may, through this department, make advances, upon the security of primary produce placed under the legal control of the Bank or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or of a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not be more than one year. The capital of the Rural Credits Department is £2,000,000. Profits are distributed as follows :—(a) one half to be placed to the credit of the Rural Credits Department Reserve Fund, and (b) one half to be placed to the credit of the Rural Credits Department Development Fund for the promotion of Primary Production.

(vii) *Mortgage Bank Department.* The Mortgage Bank Department was established in 1943 for the purpose of making long-term loans to primary producers. Through this department the Bank may make a loan to any person engaged in farming, agricultural, horticultural, pastoral or grazing operations or other form of primary production, upon the security of a mortgage to the Bank of an estate or interest in land in the Commonwealth owned by the borrower. The term of the loan shall not be less than five years nor more than forty-one years. The capital of the department is limited to £4,000,000 and profits are to be credited to the Mortgage Bank Department Reserve Fund.

(viii) *Industrial Finance Department.* The functions of the Industrial Finance Department established in January, 1946 are :—(a) to provide finance for the establishment and development of industrial undertakings ; (b) to assist in the establishment and development of industrial undertakings ; and (c) to provide advice on the operations of industrial undertakings with a view to promoting the efficient organization and conduct thereof. To exercise these functions the Bank may, through the Industrial Finance Department, lend money and purchase and sell shares or securities in an industrial undertaking. The capital of this department is £4,000,000. The Treasurer, the Bank and the Savings Bank may advance money to the Industrial Finance Department. The amount that may be advanced by the Bank is limited to £1,000,000. The profits of the department are to be placed to the credit of the Industrial Finance Department Reserve Fund.

(ix) *Housing Loans.* Provision is made for the Bank, through the General Banking Division, to make loans to individuals or building societies for the erection or purchase of homes or for the discharge of mortgages on homes. These loans must be made at the lowest possible rate of interest. Loans to individuals are to be on *crédit foncier* terms, to be secured by first mortgage on an estate or interest in land owned by the borrower and to be repaid in periods of not less than five years nor more than 35 years. Loans to building societies are to be made on such security and on such terms and conditions as the Bank determines.

(x) *Liabilities and Assets*—All Departments. Liabilities and assets of each department of the Commonwealth Bank at 30th June, 1949 are shown in the following table. The Commonwealth Savings Bank, which is operated as a separate institution, is not included (see § 2, para. 7 (iv) following):—

COMMONWEALTH BANK : LIABILITIES AND ASSETS, 30th JUNE, 1949.
(£'000.)

Item.	Central Banking Busi- ness.	General Banking Divi- sion.	Note Issue Depart- ment.	Rural Credits Depart- ment.	Mort- gage Bank Depart- ment.	Indus- trial Finance Depart- ment.	Total. (a)
LIABILITIES.							
Capital	4,000	4,000	..	2,000	3,161	4,000	17,161
Reserve Funds	1,181	740	..	517	129	252	2,819
Special Reserve—Premium on gold sold .. .. .	..	..	4,755	..	..	..	4,755
Development Fund .. .. .	..	..	..	21	..	..	21
Notes on Issue .. .. .	..	..	212,813	..	..	..	212,813
Deposits, bills payable and other liabilities—							
Special accounts of Trading Banks	367,520	..	..	..	..	..	367,520
Other deposits of Trading Banks	20,717	..	..	..	..	..	20,717
Other (including provision for contingencies)	188,793	90,053	2,282	1,372	369	11,588	286,372
Total Liabilities.. .. .	582,211	94,793	219,850	3,910	3,659	15,840	912,178
ASSETS.							
Gold and balances held abroad (in- cluding money at short call) ..	339,974	2,881	50,880	..	..	..	393,735
Australian notes and coin	4,224	3,587	..	..	..	..	7,811
Cheques and bills of other banks ..	7,941	862	..	..	..	..	8,803
Commonwealth Government securi- ties (including Commonwealth Treasury Bills)	134,467	29,574	168,878	..	..	..	332,919
Securities of other Governments, and of local and semi-governmental authorities	35,927	..	..	..	..	..	35,927
Bills receivable and remittances in transit	964	17,402	..	..	..	..	18,366
Bank premises at cost less amounts written off	229	789	..	..	..	..	1,018
Loans, advances, bills discounted, and other assets (after deducting debts considered bad or doubtful)	58,485	39,698	92	(b) 3,910	3,659	15,840	113,599
Total Assets	582,211	94,793	219,850	3,910	3,659	15,840	912,178

(a) Inter-departmental accounts totalling £8,085,000 have been offset in the combined figures.
(b) Includes Cash Balances £1,055,000.

(xi) *Profits*. Net profits of the various departments of the Commonwealth Bank for each year from 1938–39 to 1948–49 were as follows :—

COMMONWEALTH BANK : NET PROFITS.
(£'000.)

Year ended 30th June—	General Bank Depart- ment.	Central Banking Business. (a)	General Banking Division. (a)	Note Issue Depart- ment.	Rural Credits Depart- ment.	Mortgage Bank Depart- ment. (b)	Indus- trial Finance Depart- ment. (c)	Total.
1939	356	..	..	767	32	..	..	1,155
1940	457	..	..	986	38	..	..	1,481
1941	386	..	..	1,462	48	..	..	1,896
1942	527	..	..	1,658	47	..	..	2,232
1943	873	..	..	2,248	44	..	..	3,165
1944	985	..	..	2,743	38	—13	..	3,753
1945	957	..	..	3,098	37	16	..	4,108
1946 .. .. .	..	670	334	3,090	33	25	6	4,158
1947 .. .. .	..	700	350	3,942	37	30	24	5,083
1948 .. .. .	..	901	377	4,237	34	34	57	5,640
1949 .. .. .	..	975	419	4,610	39	36	165	6,244

(a) Created 21st August, 1945. Previously combined under General Bank Department.
(b) Commenced business 27th September, 1943. (c) Commenced business 2nd January, 1946.

NOTE.—Minus sign (—) indicates a loss.

(xii) *Central Banking Business—Average Liabilities and Assets.* The average liabilities and assets of the Central Banking Business and Note Issue Department of the Commonwealth Bank for the years ended June 1946 to 1949 and the quarters ended December, 1947 to December, 1949 are shown in the two tables which follow :—

COMMONWEALTH BANK : CENTRAL BANKING BUSINESS (INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE LIABILITIES.

(£'000.)

Period.	Capital and Reserve Funds.	Notes on Issue.	Special Accounts of Trading Banks.	Other Deposits of Trading Banks.	Other Liabilities.	Total Liabilities.
Year ended June—						
1946 (a)	10,537	193,813	241,842	26,864	144,385	617,441
1947	9,782	199,402	266,951	24,063	122,101	622,299
1948	9,437	198,090	263,688	28,018	142,014	641,247
1949	9,653	203,561	323,930	29,764	174,647	741,555
Quarter ended—						
December, 1947	9,467	197,893	250,706	26,964	136,672	621,702
March, 1948	9,467	194,662	271,432	30,126	149,885	655,572
June, 1948	9,467	195,967	288,317	30,053	158,769	682,573
September, 1948	9,536	196,643	275,124	30,327	172,440	684,070
December, 1948	9,692	202,182	289,607	32,120	184,971	718,581
March, 1949	9,692	204,855	346,420	32,974	164,921	758,862
June, 1949	9,692	210,567	384,570	23,625	176,255	804,709
September, 1949	9,786	213,352	326,997	26,566	183,988	760,689
December, 1949	9,936	222,006	323,170	33,524	213,003	801,639

(a) Ten months ended June, 1946.

COMMONWEALTH BANK : CENTRAL BANKING BUSINESS (INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE ASSETS.

(£'000.)

Period.	Gold and Balances held abroad.	Australian Coin.	Cheques and Bills of Other Banks.	Government and Other Securities (including Commonwealth Treasury Bills.)	Bills Receivable and Remittances in Transit.	Other Assets.	Total Assets.
Year ended June—							
1946 (a)	181,594	3,266	2,294	418,266	1,833	10,188	617,441
1947	217,642	3,365	2,603	392,217	320	6,152	622,299
1948	196,694	5,186	3,099	419,857	80	16,331	641,247
1949	336,175	4,040	3,732	356,260	47	41,301	741,555
Quarter ended—							
December, 1947	175,980	5,730	2,874	426,492	64	10,562	621,702
March, 1948	190,773	4,614	2,706	436,404	40	21,035	655,572
June, 1948	244,412	4,157	4,484	403,358	46	26,136	682,573
September, 1948	270,299	3,804	3,481	367,807	56	38,623	684,070
December, 1948	324,631	3,728	3,300	359,490	115	27,317	718,581
March, 1949	357,468	4,345	3,357	350,994	11	42,687	758,862
June, 1949	392,300	4,282	4,791	316,752	7	56,577	804,709
September, 1949	381,672	4,137	3,199	327,118	90	44,473	760,689
December, 1949	395,562	3,691	3,551	371,706	81	27,048	801,639

(a) Ten months ended June, 1946.

(xiii) *General Banking Division and Rural Credits, Mortgage Bank and Industrial Finance Departments—Average Liabilities and Assets within Australia.* The average liabilities and assets within Australia of the General Banking Division, Rural Credits,

Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank for the years ended June, 1946 to 1949 and the quarters ended December, 1947 to December, 1949 are shown in the following tables :—

COMMONWEALTH BANK : GENERAL BANKING DIVISION AND RURAL CREDITS,
MORTGAGE BANK AND INDUSTRIAL FINANCE DEPARTMENTS—AVERAGE
LIABILITIES WITHIN AUSTRALIA.(a)
(£'000.)

Period.	Inter- minable Deposits or Deposit Stock.	Deposits.			Notes in Cir- culation.	Balances due to Other Banks.	Bills payable and all other liab- ilities to the Public.	Total Liab- ilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
Year ended June—								
1946 (b)	35,775	21,101	56,876	..	341	2,112	59,329
1947	41,372	17,574	58,946	..	352	2,279	61,577
1948	44,549	13,873	58,422	..	335	3,097	62,454
1949	52,346	13,214	65,560	..	5,203	7,972	76,795
Quarter ended—								
December, 1947	..	43,335	14,092	57,427	..	347	2,859	60,633
March, 1948	44,953	13,558	58,511	..	310	4,471	63,292
June, 1948	48,402	12,903	61,305	..	313	5,080	66,758
September, 1948	..	47,776	12,792	60,568	..	295	7,156	68,019
December, 1948	..	51,200	13,741	64,941	..	1,018	8,469	74,428
March, 1949	53,521	13,608	67,129	..	9,295	8,354	84,778
June, 1949	56,888	12,714	69,602	..	10,444	7,909	87,955
September, 1949	..	66,483	12,755	79,238	..	12,360	7,610	99,208
December, 1949	..	78,407	14,200	92,607	..	13,921	8,043	114,571

(a) Includes Territories of Papua and New Guinea.

(b) Ten months ended June, 1946.

COMMONWEALTH BANK : GENERAL BANKING DIVISION AND RURAL CREDITS,
MORTGAGE BANK AND INDUSTRIAL FINANCE DEPARTMENTS—AVERAGE
ASSETS WITHIN AUSTRALIA.(a)
(£'000.)

Period.	Cash and Cash Balances.	Special Account with Common- wealth Bank.	Balances with Other Banks. (b)	Australian Public Securities.		Other Securi- ties.	Loans, Ad- vances, and Bills Dis- counted.	All Other Assets.	Total Assets.
				Trea- sury Bills.	Other.				
Year ended									
June—									
1946 (c) ..	7,366	..	195	5,379	35,249	6	20,533	1,459	70,187
1947 ..	7,176	..	230	3,131	36,488	30	25,098	1,090	74,443
1948 ..	7,432	..	280	1,189	32,661	35	33,338	1,793	76,728
1949 ..	6,871	..	399	461	34,461	66	49,230	1,675	93,163
Quarter ended—									
December, 1947	7,676	..	295	1,429	32,663	30	30,990	1,773	74,856
March, 1948 ..	7,800	..	287	1,000	32,020	30	34,240	1,838	77,215
June, 1948 ..	7,601	..	315	769	32,635	49	38,138	1,881	81,388
September, 1948	6,677	..	300	750	31,807	51	41,340	1,844	82,859
December, 1948	7,955	..	386	750	31,987	62	46,074	1,787	89,001
March, 1949 ..	7,221	..	372	346	37,577	75	52,700	1,565	99,856
June, 1949 ..	5,630	..	538	..	36,381	78	56,807	1,504	100,938
September, 1949	18,331	..	422	..	31,266	76	63,183	1,512	114,790
December, 1949	22,803	..	562	..	35,535	73	69,559	1,573	130,165

(a) Includes Territories of Papua and New Guinea.
Banks.

(c) Ten months ended June, 1946.

(b) Includes notes, cheques and bills of other

6. Nine Trading Banks.—(i) *Average Liabilities and Assets in Australia.* The average liabilities and assets within Australia of the Nine Trading Banks for the years ended June, 1939 and 1949 and the quarters ended December, 1947 to December, 1949 are shown in the following tables. A list of these banks is given in para. 3, page 709.

NINE TRADING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA.

(£'000.)

Period.	Inter- mable Deposits or Deposit Stock.	Deposits.			Notes in Cir- culation.	Balances due to other Banks.	Bills payable and all other Liabilities to the Public.	Total Li- abilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
Year ended June—								
1939	2,644	a 118,868	198,793	317,661	167	921	(b) 3,005	324,398
1941	2,619	a 152,377	206,124	358,501	167	1,002	(b) 3,398	365,687
1942	2,611	a 178,438	199,827	378,265	167	1,112	(b) 3,642	385,797
1943	2,597	a 233,299	193,357	426,656	167	1,069	(b) 4,125	434,614
1944	2,511	a 290,988	211,703	502,691	166	1,016	(b) 4,485	510,869
1945	1,850	a 343,773	224,023	567,796	166	1,083	(b) 4,843	575,738
1946(c) ..	1,664	385,953	220,415	606,368	166	1,194	6,338	615,730
1947	889	429,749	206,862	636,611	159	1,748	7,792	647,199
1948	733	471,604	201,892	673,496	158	11,933	8,423	694,743
1949	729	565,140	211,262	776,402	158	32,522	10,576	820,387
Quarter ended—								
December, 1947	730	456,587	203,369	659,956	158	7,166	8,448	676,458
March, 1948 ..	729	489,040	200,756	689,796	158	15,839	8,443	714,965
June, 1948 ..	729	511,394	200,572	711,966	158	21,814	9,281	743,948
September, 1948	729	502,810	200,448	703,258	158	32,203	9,198	745,546
December, 1948	729	554,106	212,699	766,805	158	23,983	10,786	802,461
March, 1949(d) ..	729	596,731	214,642	811,373	158	30,461	10,448	853,169
June, 1949 ..	729	606,914	217,258	824,172	158	43,440	11,875	880,374
September, 1949(d)	729	582,431	212,567	794,998	158	36,678	10,610	843,173
December, 1949	729	648,494	218,425	866,919	158	19,737	13,410	900,953

(a) Includes Other Liabilities. (b) Excludes Other Liabilities. (c) Includes Territories of Papua and New Guinea for this and following periods. (d) Technical adjustments in the method of compiling figures for advances and deposits were made by two banks from January, 1949 and by another from July, 1949. The effect of this was to reduce both deposits and advances by £9,000,000 in January, 1949 and £2,600,000 in July, 1949.

NINE TRADING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA.

(£'000.)

Period.	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Bal- ances with Other Banks. (a)	Australian Public Securities.		Other Securi- ties.	Loans, Ad- vances and Bills Dis- counted.	All Other Assets.	Total Assets.
				Trea- sury Bills.	Other.				
Year ended June—									
1939	33,597	..	3,938	21,533	b 20,477	(c)	d 288,109	(e) 9,421	377,075
1941	41,163	..	4,993	39,937	b 52,903	(c)	d 282,426	e 10,239	431,661
1942	41,415	16,848	5,899	42,267	b 59,640	(c)	d 273,729	e 10,105	449,903
1943	43,322	68,420	6,765	59,443	b 62,907	(c)	d 248,710	(e) 9,925	499,501
1944	40,908	139,965	7,334	63,826	b 79,961	(c)	d 232,421	(e) 9,787	574,202
1945	38,038	207,992	7,744	60,283	b 105,842	(c)	d 208,719	(e) 9,776	638,394
1946(f) ..	38,462	238,008	8,748	59,782	b 115,272	(c)	d 214,401	e 9,802	684,565
1947	37,927	264,991	10,302	25,831	95,027	164	261,140	14,280	709,662
1948	44,399	262,258	12,254	18,089	65,606	g 1,874	329,850	17,154	751,475
1949	48,016	322,670	14,267	22,110	61,455	742	368,582	20,213	858,055
Quarter ended—									
December, 1947	43,979	249,103	13,473	13,947	67,141	g 1,923	330,991	16,455	737,012
March, 1948 ..	46,377	269,976	11,824	21,946	59,301	g 1,857	335,720	17,366	764,367
June, 1948 ..	46,418	287,109	12,913	24,896	59,200	g 1,909	344,074	19,490	796,099
September, 1948	47,448	274,045	12,403	15,173	59,452	g 1,789	362,322	20,539	793,171
December, 1948	50,778	288,457	14,966	28,585	60,109	287	372,505	20,543	836,230
March, 1949(h) ..	50,689	345,114	14,301	30,623	62,912	364	361,957	20,483	886,443
June, 1949 ..	43,147	383,065	15,398	14,062	63,344	528	377,544	19,287	916,375
September, 1949	46,513	325,357	13,698	13,793	72,854	490	391,929	18,507	883,141
December, 1949	55,444	321,453	18,998	33,177	76,398	334	403,222	18,865	927,888

(a) Includes Notes, Cheques and Bills of Other Banks. (b) Government and Municipal Securities.
(c) Included with Loans, Advances and Bills Discounted. (d) Includes Other Assets—see footnotes
(e) and (f). (e) Landed and House Property only. Other assets included with Loans, Advances
and Bills Discounted. (f) Includes Territories of Papua and New Guinea for this and following
periods. (g) Includes shares held by National Bank of Australasia Ltd. in Queensland National
Bank Ltd. (in voluntary liquidation). (h) See footnote (d) to table above.

(ii) *Ratios of Assets and Liabilities to Total Deposits.* The following table shows, for the Nine Trading Banks, the ratios of certain assets and liabilities to total deposits for the years ended June, 1939 and 1941 to 1949. The ratios are based on the average liabilities and assets for the years shown.

NINE TRADING BANKS : RATIOS OF AVERAGE ASSETS AND LIABILITIES TO AVERAGE TOTAL DEPOSITS.

(Per cent.)

Year ended June—	Percentage of Total Deposits.						
	Cash and (Cash Balances.	Treasury Bills.	Government and Municipal Securities. (a)	Special Account with Common-wealth Bank.	Advances.	Deposits.	
						Not Bearing Interest.	Bearing Interest.
1939	10.6	6.8	6.5	..	90.7	37.4	62.6
1941	11.5	11.1	14.8	..	78.8	42.5	57.5
1942	11.0	11.2	15.8	4.4	72.4	47.2	52.8
1943	10.2	13.9	14.7	16.0	58.3	54.7	45.3
1944	8.1	12.7	15.9	27.8	46.2	57.9	42.1
1945	6.7	10.6	18.6	36.6	36.8	60.6	39.4
1946	6.3	9.9	19.0	39.3	35.0	63.7	36.3
1947	6.0	4.1	14.9	41.6	41.0	67.5	32.5
1948	6.6	2.7	9.7	38.9	49.0	70.0	30.0
1949	6.2	2.9	7.9	41.6	47.5	72.8	27.2

(a) Excludes Treasury Bills.

(iii) *Proportion of Non-Interest bearing to Total Deposits.* The following table shows, for each State, the proportion of non-interest bearing deposits to total deposits with the Nine Trading Banks for each of the ten years ended June, 1939 and 1941 to 1949. The ratios are based on the average deposits for the years shown.

NINE TRADING BANKS : PROPORTION OF NON-INTEREST BEARING DEPOSITS TO TOTAL DEPOSITS.

(Per cent.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total. (a)
1939	43.5	30.3	45.4	26.1	45.7	36.5	61.1	23.2	37.4
1941	49.8	35.3	48.5	30.1	46.1	40.4	68.1	26.9	42.5
1942	53.8	40.8	51.7	35.3	51.5	45.6	71.3	28.2	47.2
1943	59.4	49.9	60.3	42.3	59.4	52.6	72.3	31.6	54.7
1944	61.6	53.0	64.9	46.0	61.8	55.4	76.6	34.0	57.9
1945	63.8	55.9	67.6	49.2	63.2	57.7	100.0	37.2	60.6
1946	66.1	60.5	69.4	51.4	66.2	62.6	77.2	42.4	63.7
1947	69.7	65.6	71.4	55.7	69.8	65.2	77.8	47.6	67.5
1948	72.3	68.5	73.3	58.8	73.0	66.3	81.0	53.3	70.0
1949	75.2	71.0	75.7	63.0	75.9	67.5	81.3	58.4	72.8

(a) Includes Papua and New Guinea for 1946 and following periods.

(iv) *Ratio of Advances to Total Deposits.* The ratio of advances to total deposits, for each State for the years ended June, 1939 and 1941 to 1949, is shown in the following table. The ratios are based on the averages of deposits and advances for the years shown.

NINE TRADING BANKS : RATIO OF ADVANCES TO TOTAL DEPOSITS.

(Per cent.)

Year ended June—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total. (a)
1939	104.5	71.6	99.2	77.6	155.5	57.0	24.5	37.7	90.7
1941	84.3	68.5	89.1	62.7	130.6	53.0	20.7	30.3	78.8
1942	76.9	62.2	88.4	56.3	116.8	45.9	14.0	30.4	72.4
1943	62.4	54.8	58.5	43.9	87.7	32.5	7.9	22.2	58.3
1944	46.7	50.3	36.5	38.8	64.9	24.4	45.1	19.0	46.2
1945	38.6	36.9	30.3	33.7	54.6	21.0	92.0	18.2	36.8
1946	37.6	32.6	31.0	33.6	53.7	20.7	11.5	18.1	35.0
1947	43.1	39.4	37.8	38.4	55.5	29.2	16.2	21.1	41.0
1948	53.3	48.2	46.3	37.2	52.1	41.0	31.9	23.6	49.0
1949	50.8	50.3	44.9	29.1	42.0	50.9	55.1	25.5	47.5

(a) Includes Papua and New Guinea for 1946 and following periods.

7. **Other Cheque-paying Banks.**—*Average Liabilities and Assets within Australia.* The average liabilities and assets within Australia of "other cheque-paying banks" for the years ended June, 1946 to 1949 and the quarters ended December, 1947 to December, 1949 are shown in the following tables. A list of these banks is given in para. 3, page 710.

OTHER CHEQUE-PAYING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.
(£'000.)

Period.	Inter- minable Deposits or Deposit Stock.(a)	Deposits.			Notes in Cir- culation.	Bal- ances due to Other Banks.	Bills payable and all other Liabilities to the Public.	Total Li- abilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
Year ended June—								
1946 (b) ..	12,583	7,741	5,013	12,754	..	74	504	25,915
1947	12,322	9,975	5,079	15,054	..	93	295	27,764
1948	16,476	12,522	5,434	17,956	..	411	456	35,299
1949	20,559	18,385	7,330	25,721	..	357	776	47,413
Quarter ended—								
December, 1947	11,936	11,205	5,117	16,322	..	656	467	29,381
March, 1948 (c) ..	21,210	13,297	5,609	18,906	..	271	468	40,855
June, 1948	21,065	14,864	6,053	20,917	..	445	490	42,917
September, 1948	20,795	14,942	6,656	21,598	..	700	628	43,721
December, 1948	20,591	16,916	7,194	24,110	..	303	706	45,770
March, 1949 ..	20,358	21,101	7,773	28,874	..	160	770	50,162
June, 1949	20,491	20,578	7,724	28,302	..	204	999	49,996
September, 1949	20,498	18,842	7,684	26,526	..	128	1,196	48,348
December, 1949	20,341	19,849	8,707	28,556	..	173	1,155	50,225

(a) Inscribed stock and debentures, Rural Bank of New South Wales and State Bank of South Australia. (b) Ten months ended June, 1946. (c) From March, 1948 the General Bank Department of the Rural Bank of New South Wales has been included. Previously only the Rural Bank Department was included.

OTHER CHEQUE-PAYING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.
(£'000.)

Period.	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Bal- ances with other Banks. (a)	Australian Public Securities.		Other Securi- ties.	Loans, Ad- vances and Bills Dis- counted.	All Other Assets. (b)	Total Assets.
				Trea- sury Bills.	Other.				
Year ended June—									
1946 (c) ..	1,848	1,919	2,388	965	7,772	218	16,795	1,259	33,164
1947	2,518	1,960	1,638	730	8,478	265	22,808	2,341	40,798
1948	3,128	1,430	1,150	860	10,546	179	31,470	2,614	51,386
1949	4,172	1,260	1,437	1,872	13,076	167	39,783	2,793	65,160
Quarter ended—									
December, 1947	2,681	1,603	1,078	636	8,616	197	26,469	2,897	44,177
March, 1948 (d)	3,470	1,456	1,337	804	12,007	145	36,748	2,379	58,406
June, 1948 ..	3,870	1,118	1,163	1,280	13,286	147	37,741	2,090	60,704
September, 1948	3,859	1,079	1,620	1,162	13,039	154	38,450	2,152	61,515
December, 1948	4,011	1,149	1,778	2,323	13,376	163	39,066	2,539	63,405
March, 1949 ..	5,241	1,306	1,389	2,392	14,073	175	39,985	3,171	67,732
June, 1949 ..	3,578	1,505	959	1,011	15,220	175	41,630	3,312	67,990
September, 1949	3,022	1,040	1,010	107	13,260	161	43,510	3,044	65,774
December, 1949	3,763	1,177	1,231	340	11,878	230	45,329	3,718	68,212

(a) Includes Notes, Cheques and Bills of Other Banks. (b) Includes Rural and Industries Bank of Western Australia's account with State Treasury. (c) Ten months ended June, 1946. (d) See footnote (c) to table above.

8. **All Cheque-paying Banks.**—(i) *General.* Particulars of the average liabilities and assets within Australia of all cheque-paying banks in Australia, including the General Banking Division and Rural Credits, Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank of Australia, are given in the following paragraph. The Central Banking Business of the Commonwealth Bank of Australia is excluded.

(ii) *Average Liabilities and Assets within Australia.* The following tables show the average liabilities and assets within Australia of all cheque-paying banks for the years ended June, 1946 to 1949 and the quarters ended December, 1947 to December, 1949.

ALL CHEQUE-PAYING BANKS : AVERAGE LIABILITIES WITHIN AUSTRALIA.(a)
(£'000.)

Period.	Inter-minable Deposits or Deposit Stock.	Deposits.			Notes in Circulation.	Bal-ances due to Other Banks.	Bills payable and all other Liabilities to the Public.	Total Li-abilities.
		Not Bearing Interest.	Bearing Interest.	Total.				
Year ended June—								
1946 (b) ..	14,239	437,037	245,824	682,861	166	1,649	9,306	708,221
1947 ..	13,211	481,096	229,515	710,611	159	2,193	10,366	736,540
1948 ..	17,208	528,675	221,199	749,874	158	12,680	12,576	792,496
1949 ..	21,288	635,871	231,812	867,683	158	38,142	19,324	946,595
Quarter ended—								
December, 1947	12,666	511,127	222,578	733,705	158	8,169	11,774	766,472
March, 1948 ..	21,939	547,290	219,923	767,213	158	16,420	13,382	819,112
June, 1948 ..	21,794	574,660	219,588	794,248	158	22,572	14,851	853,623
September, 1948	21,524	565,528	219,896	785,424	158	33,198	16,982	857,286
December, 1948	21,320	622,222	233,634	855,856	158	25,364	19,961	922,659
March, 1949 ..	21,087	671,353	236,023	907,376	158	39,916	19,572	988,109
June, 1949 ..	21,220	684,380	237,696	922,076	158	54,088	20,783	1,018,325
September, 1949	21,227	667,756	233,006	900,762	158	49,166	19,416	990,729
December, 1949	21,070	746,750	241,332	988,082	158	33,831	22,608	1,065,749

(a) Includes Territories of Papua and New Guinea.

(b) Ten months ended June, 1946.

ALL CHEQUE-PAYING BANKS : AVERAGE ASSETS WITHIN AUSTRALIA.(a)
(£'000.)

Period.	Cash and Cash Bal-ances.	Special Account with Com-mon-wealth Bank.	Bal-ances with Other Banks.	Australian Public Securities.		Other Securities.	Loans, Ad-vances and Bills Dis-counted.	All Other Assets.	Total Assets.
				Trea-sury Bills.	Other.				
Year ended June—									
1946 (b) ..	48,354	241,843	11,507	68,351	160,294	390	249,436	15,328	795,503
1947 ..	47,621	266,951	12,170	29,692	139,993	459	309,706	18,311	824,903
1948 ..	54,950	263,088	13,684	20,147	108,813	2,088	394,658	21,561	879,589
1949 ..	59,959	323,930	16,103	24,444	109,592	975	457,595	24,681	1,016,379
Quarter ended—									
December, 1947	54,336	250,706	14,846	16,012	108,420	2,150	388,450	21,125	856,045
March, 1948 ..	57,647	271,432	13,448	23,810	103,328	2,032	406,708	21,553	899,988
June, 1948 ..	57,889	288,317	14,391	26,954	105,121	2,105	419,053	23,461	938,191
September, 1948	57,984	275,124	14,323	17,085	104,388	1,994	442,112	24,535	937,545
December, 1948	62,744	289,606	17,130	31,658	104,472	512	457,045	24,869	988,636
March, 1949 ..	63,151	349,420	16,062	33,361	114,502	614	454,642	25,219	1,054,031
June, 1949 ..	52,353	384,570	16,895	15,673	114,945	781	475,981	24,103	1,085,503
September, 1949	67,866	329,997	15,130	13,900	117,380	747	498,622	23,063	1,063,705
December, 1949	82,067	323,170	20,791	33,523	123,811	637	518,110	24,156	1,126,265

(a) Includes Territories of Papua and New Guinea.

(b) Ten months ended June, 1946.

9. Classification of Advances within Australia Commonwealth Bank and Nine Trading Banks.—A dissection of advances made by the Commonwealth Bank (General Banking Division, and the Rural Credits, Mortgage Bank and Industrial Finance Departments) and the Nine Trading Banks at the end of December, 1949 is given in the following table. Business advances, which have been classified according to the main industry of the borrower, are those made mainly for business purposes and include all loans to corporate bodies other than public authorities. Advances made to public authorities are those made to Commonwealth, State and Local Governments, Government Agencies and Semi-Governmental Authorities irrespective of the purpose of the advance or the industry in which the authority is engaged. Personal advances, which have been classified according to purpose, include advances to persons in their private capacity for such purposes as the purchase of a house or of household equipment, repayment of personal debts, etc.

COMMONWEALTH BANK^(a) AND NINE TRADING BANKS: CLASSIFICATION OF
ADVANCES WITHIN AUSTRALIA^(b), END OF DECEMBER, 1949.
(£'000.)

Classification.	N.S.W. (c)	Vic.	Q'land. (b)	S. Aust. (d)	W.Aust.	Tas.	Total Aust. (b)	Per- centage of Total.
A. BUSINESS ADVANCES CLASSIFIED ACCORDING TO MAIN INDUSTRY OF BORROWER.								
1. Agriculture, Dairying and Grazing—								%
Mainly Sheep Grazing ..	22,446	8,868	3,487	1,881	1,853	592	39,127	8.19
Mainly Cattle Grazing ..	2,758	1,596	4,598	143	249	169	9,513	1.99
Mainly Wheat Growing ..	6,249	3,272	1,015	1,678	2,815	7	15,036	3.15
Mainly Sugar Growing ..	276	..	4,368	..	..	..	4,644	0.97
Mainly Fruit Growing ..	1,182	1,916	813	748	605	473	5,737	1.20
Mainly Dairying and Pig Rais- ing ..	7,707	9,615	9,824	1,217	1,280	579	30,222	6.32
Other Rural ..	2,468	2,153	1,968	448	371	675	8,083	1.69
Total Class 1 ..	43,086	27,420	26,073	6,115	7,173	2,495	112,362	23.51
2. Manufacturing ..	34,239	44,874	7,816	5,403	3,372	1,555	97,259	20.35
3. Transport, Storage and Communication ..	3,482	3,405	1,552	516	615	365	9,935	2.08
4. Finance and Property— Builders and Contractors ..	4,317	3,476	1,351	314	288	389	10,135	2.12
Building Invest- ment Com- panies and Building Soc- ieties, etc. ..	13,155	4,020	276	784	135	56	18,426	3.86
Other (Banking, Insurance, etc.) (e) ..	13,035	13,683	4,459	1,310	2,214	1,194	35,895	7.51
Total Class 4 ..	30,507	21,179	6,086	2,408	2,637	1,630	64,456	13.49
5. Commerce—								
Retail Trade ..	11,200	10,244	4,431	2,225	1,934	1,371	31,405	6.57
Wholesale Trade ..	17,010	14,677	2,757	2,020	1,441	818	38,723	8.11
Total Class 5 ..	28,210	24,921	7,188	4,245	3,375	2,189	70,128	14.68
6. Miscellaneous (f) ..	9,955	9,678	4,613	1,206	1,638	1,184	28,274	5.92
7. Not elsewhere specified	1,175	1,245	374	324	134	245	3,497	0.73
Total ..	150,654	132,722	53,702	20,217	18,944	9,672	305,911	80.76

B. ADVANCES TO PUBLIC AUTHORITIES.

Public Authority Advances (including Government, Semi-Governmental and Municipal Bodies) ..								%
	4,245	3,995	1,835	405	162	191	10,833	2.27

C. PERSONAL ADVANCES CLASSIFIED ACCORDING TO MAIN PURPOSE OF ADVANCE.

								%
1. Advances for building or purchasing own home (Individuals) ..	21,108	18,426	8,855	2,085	3,454	1,508	55,436	11.60
2. All Other (including Per- sonal Loans) ..	11,391	8,714	2,646	1,145	1,193	596	25,665	5.37
Total ..	32,499	27,140	11,481	3,230	4,647	2,104	81,101	16.97

TOTAL ADVANCES.

Grand Total ..	187,398	163,857	67,018	23,852	23,753	11,967	477,845	%
								100.00

(a) General Banking Division and the Rural Credits, Mortgage Bank and Industrial Finance Depart-
ments. (b) Includes Papua and New Guinea. (c) Includes Australian Capital Territory.
(d) Includes Northern Territory. (e) Includes trustee, pastoral finance and cash order companies,
friendly societies, stockbrokers, real estate agents, etc. (f) Includes (i) fishing, hunting, trapping and
forestry; (ii) mining and quarrying; (iii) legal and other profession, religious, charitable and benevolent
institutions, hospitals, schools and industrial and trade associations; (iv) amusements, wireless broad-
casting, sporting associations and promoters; and (v) hotels, boarding houses and restaurants, laundries,
social clubs, etc.

10. **Deposit Rates—Cheque-paying Banks.**—Particulars of interest rates for fixed deposits since 1932 are shown hereunder. The rates paid by the Commonwealth Bank have not always been the same as those paid by the other trading banks.

BANK FIXED DEPOSIT RATES.

(Per cent. per annum).

Dates from which rates operated.	Deposits for—			
	Three Months.	Six Months.	Twelve Months.	Two Years.
8th March, 1932	2½	3	3½	4
May–June, 1932 (a)	2½	3	3½	3½
1st November, 1932 (b)	2½	2¾	3	3½
7th February, 1933	2	2½	2¾	3
12th April, 1934	2	2½	2½	2¾
9th August, 1934	1½	2½	2½	2¾
11th October, 1934	1½	2	2½	2½
17th December, 1934	1	1½	2½	2½
24th March, 1936 (c)	2	2½	2½	3
24th January, 1940.. .. .	1¾	2½	2½	2¾
28th May, 1940	1½	2	2½	2½
22nd September, 1941	1½	1¾	2	2½
14th March, 1942	1½	1½	1¾	2
17th January, 1944.. .. .	1	1½	1½	2
11th August, 1944	1½	1¾	1¾	1¾
1st December, 1945.. .. .	1½	1¾	1	(d) 1½

(a) All Banks did not take simultaneous action. (b) Bank of New South Wales reduced the rates for 6, 12 and 24 months terms by one-quarter of 1 per cent. from 23rd August, 1932. (c) Commonwealth Bank only. Bank of New South Wales from 2nd March and Bank of Adelaide from 3rd March, 1936. (d) On first £10,000; rate on amount in excess of £10,000 is 1 per cent.

11. **Clearing House Returns.**—(i) *Annual Clearings.* Particulars of the aggregate bank clearings for each capital city, compiled from information supplied by the Commonwealth Bank, Sydney, are given in the following table. Since October, 1920, transactions connected with the issue and redemption of Treasury Bills have resulted in largely inflated clearings. These transactions are of an abnormal character, and have been excluded from the table.

CLEARING HOUSE RETURNS : VALUE OF BILLS, CHEQUES, ETC.(a)

(£'000.)

Year.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
1939	932,367	812,563	222,988	152,334	107,089	33,898	2,261,239
1941	1,139,353	1,096,037	243,937	195,757	116,565	36,469	2,828,118
1942	1,248,500	1,263,869	275,639	220,475	125,116	40,385	3,173,984
1943	1,442,344	1,411,724	335,137	248,295	137,599	45,853	3,620,952
1944	1,499,603	1,446,607	369,016	266,123	144,699	52,136	3,778,184
1945	1,512,418	1,483,450	366,210	268,255	151,652	57,409	3,839,394
1946	1,854,271	1,825,987	380,642	321,043	189,747	65,671	4,646,361
1947	2,123,697	1,964,027	450,912	370,084	226,467	73,131	5,208,318
1948	2,599,995	2,365,782	528,003	468,582	288,812	86,300	6,337,474
1949	2,998,359	2,778,183	623,228	543,879	344,684	98,636	7,386,969

(a) Excludes Treasury Bill transactions.

(ii) *Index of Annual Clearings.* The following index of bank clearings in each capital city for the years 1939 and 1941 to 1949 has been computed from the figures in the previous paragraph. The base used is the average of the years 1936 to 1938. Clearings connected with the issue and redemption of Treasury Bills have been excluded, but no adjustment has been made on account of alterations in the banking system.

INDEX OF BANK CLEARINGS.

Base : Average of Years 1936 to 1938 = 1,000.

Year.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
1936-38 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000
1939	1,027	1,000	1,096	1,001	1,017	1,151	1,023
1941	1,256	1,349	1,198	1,286	1,107	1,239	1,279
1942	1,376	1,555	1,354	1,449	1,188	1,372	1,436
1943	1,589	1,737	1,647	1,631	1,307	1,557	1,638
1944	1,653	1,780	1,813	1,749	1,374	1,771	1,709
1945	1,667	1,825	1,799	1,763	1,440	1,950	1,737
1946	2,043	2,247	1,914	2,109	1,802	2,231	2,102
1947	2,340	2,416	2,215	2,432	2,151	2,484	2,356
1948	2,865	2,911	2,594	3,079	2,743	2,931	2,867
1949	3,304	3,418	3,062	3,574	3,274	3,350	3,341

(iii) *Average Weekly Clearings.* The average weekly clearings in each capital city for the years ended on the last Monday in June, 1939 and 1941 to 1949 and for the quarters ended December, 1947 to 1949 are shown in the following table. Transactions connected with the issue and redemption of Treasury Bills are excluded.

BANK CLEARINGS(a) : AVERAGE WEEKLY CLEARINGS.
(£'000.)

Period.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
Year ended							
June—							
1939	17,832	15,415	4,212	2,953	2,055	623	43,090
1941	21,194	19,784	4,726	3,499	2,229	672	52,104
1942	22,747	22,823	4,815	3,970	2,336	731	57,422
1943	26,084	25,830	5,004	4,532	2,489	813	65,652
1944	28,071	27,051	6,816	4,924	2,719	943	70,524
1945	28,556	27,839	6,895	5,127	2,777	1,032	72,226
1946	30,968	31,398	7,154	5,593	3,257	1,185	79,555
1947 (b) ..	38,580	35,631	7,978	6,469	3,926	1,310	93,804
1948 (b) ..	44,786	41,237	9,288	8,038	4,892	1,543	100,784
1949 (b) ..	53,519	48,870	11,131	9,663	6,039	1,778	131,000
Quarter ended b—							
December, 1947	44,988	41,806	9,787	7,895	4,987	1,477	110,940
March, 1948 ..	42,284	38,648	8,299	8,163	5,252	1,550	104,196
June, 1948 ..	51,467	46,713	10,162	9,182	5,204	1,682	124,470
September, 1948	49,955	46,425	10,993	8,569	5,184	1,671	122,797
December, 1948	54,886	48,942	10,883	9,877	6,354	1,692	132,634
March, 1949 ..	49,775	47,142	10,458	10,153	6,750	1,866	126,144
June, 1949 ..	59,331	52,025	12,179	10,058	5,879	1,888	142,260
September, 1949	55,110	50,021	11,286	9,430	6,023	1,844	133,714
December, 1949	65,196	62,426	13,756	11,995	7,737	1,962	163,072

(a) Excludes transactions connected with the issue and redemption of Treasury Bills.
ended on last Wednesday.

(b) Periods

12. **Debits to Customers' Accounts—All Cheque-paying Banks.**—Statistics of debits to customers' accounts have been collected since September, 1945. Generally they represent the total of all cheques drawn by the customers of the banks. In the following table are shown the average weekly debits to customers' accounts of all cheque-paying banks for each State for the years ended June, 1946 to 1949 and the quarters ended December, 1947 to December, 1949.

AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS: ALL CHEQUE-PAYING BANKS.
(£'000.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Total.
Year ended June—								
1946 (a) ..	53,887	45,791	14,879	8,661	5,855	2,889	95	131,057
1947 ..	65,690	55,433	16,972	10,457	7,189	3,374	119	159,234
1948 (b) ..	78,383	64,285	20,019	12,722	8,746	3,947	142	188,244
1949 ..	91,990	77,699	24,546	15,493	10,770	4,699	205	225,402
Quarter ended—								
December, 1947 ..	80,552	65,757	21,085	12,753	8,884	3,903	134	193,068
March, 1948 ..	74,754	59,240	18,481	12,302	8,961	3,771	131	177,640
June, 1948 ..	86,244	72,684	21,978	14,591	9,620	4,450	167	209,734
September, 1948 ..	83,631	71,531	23,215	13,710	9,493	4,271	175	206,026
December, 1948 ..	92,467	76,703	24,220	15,516	11,071	4,578	176	224,731
March, 1949 ..	89,418	78,859	24,024	16,112	11,665	4,762	213	225,053
June, 1949 ..	102,441	83,704	26,724	16,632	10,852	5,185	257	245,795
September, 1949 ..	96,442	84,149	25,981	15,977	11,237	5,101	253	239,140
December, 1949 ..	115,883	103,055	30,261	19,523	14,018	5,179	232	288,151

(a) Ten months ended June, 1946. (b) From January, 1948 debits to Customers' Accounts relating to the transfer of accounts from the Queensland National Bank Ltd. (in voluntary liquidation) to the National Bank of Australasia Ltd., have been excluded.

13. **Rates of Exchange.**—(i) *Oversea Exchange Rates.* In the following table the average telegraphic transfer rates of exchange for Sydney on a number of oversea countries are given. For the years 1938–39, 1944–45 and 1945–46 the rates quoted are the averages of quotations at the end of each month. For the years 1946–47 to 1948–49 the rates are averages of daily quotations. Generally the averages are based on rates quoted by the Commonwealth Bank of Australia, but where these were not available rates quoted by other Australian Banks have been used.

OVERSEA EXCHANGE RATES: AVERAGE TELEGRAPHIC TRANSFER RATES FOR SYDNEY ON OVERSEA COUNTRIES.(a)

Country.	Basis of Quotation.	Rate.	1938–39.	1944–45.	1945–46.	1946–47.	1947–48.	1948–49.
United Kingdom	£A. to £Stg.100	{ Buying Selling	125.000 125.500	125.000 125.500	125.000 125.500	125.000 125.500	125.000 125.500	125.000 125.500
New Zealand ..	£A. to £N.Z.100	{ Buying Selling	100.063 100.594	100.000 100.500	100.000 100.500	100.000 100.500	100.000 100.500	120.638 121.171
South Africa ..	£A. to £S.A.100	{ Buying Selling	123.848 125.546	123.500 125.350	124.073 125.602	124.125 125.625	124.125 125.625	124.125 125.625
Fiji ..	£A. to £F.100	{ Buying Selling	111.125 113.000	111.125 113.000	111.125 113.000	111.125 113.000	111.125 113.000	111.125 113.000
New York ..	Dollars to £A.1	{ Buying Selling	3.7945 3.7581	3.2370 3.1982	3.2370 3.1982	3.2361 3.1991	3.2350 3.2002	3.2298 3.2041
Montreal ..	Dollars to £A.1	{ Buying Selling	3.8063 3.7797	3.5860 3.5198	3.5740 3.5198	3.2453 3.2020	3.2360 3.1992	3.2301 3.2039
France ..	Francs to £A.1	{ Buying Selling	142.29 141.21	(b) (b)	4386.74 4379.73	386.58 379.89	4470.23 508.98	811.29 798.67
Switzerland ..	Francs to £A.1	{ Buying Selling	16.778 16.590	13.970 13.685	13.959 13.700	13.938 13.766	13.938 13.766	13.938 13.766

(a) Years ended 30th June. (b) No quotations. (c) Three months. (d) Seven months.
(e) No quotations, 27th January to 13th April.

OVERSEA EXCHANGE RATES: AVERAGE TELEGRAPHIC TRANSFER RATES
FOR SYDNEY ON OVERSEA COUNTRIES.(a)—*continued*.

Country.	Basis of Quotation.	Rate.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Belgium ..	Francs to £A.1	{ Buying Selling	112.217 110.935	(b)	c142.400 d139.630	142.368 139.662	142.350 139.680	142.350 139.680
Holland ..	Florins to £A.1	{ Buying Selling	7.046 6.943	(b) (b)	(b) (b)	8.610 8.460	8.605 8.465	8.605 8.465
Denmark ..	Kroner to £A.1	{ Buying Selling	18.017 17.781	(b) (b)	(b) (b)	15.590 15.290	15.590 15.290	15.590 15.290
Norway ..	Kroner to £A.1	{ Buying Selling	16.007 15.803	(b) (b)	(b) (b)	16.120 15.820	16.120 15.820	16.120 15.820
Sweden ..	Kronor to £A.1	{ Buying Selling	15.623 15.406	(b) (b)	(b) (b)	11.683 11.473	11.665 11.465	11.665 11.465
Java ..	Guilders to £A.1	{ Buying Selling	7.030 6.939	(b) (b)	(b) (b)	(b) (e) 8.461	(b) 8.465	(b) 8.465
Manila ..	Pesos to £A.1	{ Buying Selling	7.659 7.528	(b) (b)	(b) (b)	6.540 6.424	6.533 6.417	6.529 6.413
Hong Kong ..	Pence (Aust.) to 1 Dollar	{ Buying Selling	18.526 18.883	(b) (b)	f 18.202 f 19.083	18.570 18.994	18.600 18.969	18.587 18.952
India and Ceylon	Pence (Aust.) to 1 Rupee	{ Buying Selling	22.287 22.604	22.313 22.781	22.204 22.800	22.319 22.775	22.328 22.766	22.328 22.766
Pakistan ..	Pence (Aust.) to 1 Rupee	{ Buying Selling	(g) (g)	(g) (g)	(g) (g)	(g) (g)	f 22.328 f 22.766	22.328 22.766
Noumea ..	Francs to £A.1	{ Buying Selling	(b) (b)	(b) (b)	(b) (b)	(b) (b)	(b) h159.000	(b) 159.000
Singapore ..	Pence (Aust.) to 1 Dollar	{ Buying Selling	34.706 35.224	(b) (b)	f 34.766 f 35.711	34.904 35.594	35.019 35.539	34.930 35.484

(a) Years ended 30th June. (b) No quotations. (c) Three months. (d) Eight months.
(e) Eleven months. (f) Six months. (g) Part of India. (h) Five months. (i) Four months.

(ii) *Interstate*. Exchange rates between the several capital cities of the States at 30th June, 1949 were as follows:—

INTERSTATE EXCHANGE RATES, 30th JUNE, 1949.
(Per cent.—s. d.)

Between—	And—					
	New South Wales.	Victoria.	Brisbane and adjacent towns.	South Australia.	Perth and all but distant towns.	Tasmania.
Sydney and New South Wales towns ..	..	2 6	2 6	5 0	7 6	5 0
Melbourne and Victorian towns ..	2 6	..	5 0	2 6	5 0	2 6
Brisbane and adjacent towns ..	2 6	5 0	..	7 6	10 0	7 6
Adelaide and South Australian towns ..	5 0	2 6	7 6	..	2 6	5 0
Perth and all but distant towns ..	7 6	5 0	10 0	2 6	..	7 6
Hobart and Tasmanian towns ..	5 0	2 6	7 6	5 0	7 6	..

§ 2. Savings Banks.

1. *General*.—The inauguration of Savings Banks in Australia dates from 1819, when a private Savings Bank was opened in Sydney. In 1832 the legislature created “the Savings Bank of New South Wales” under the control of trustees, and shortly

after its establishment the funds of the private Savings Bank were transferred to the new institution. In the other States provision for placing deposits with Savings Banks dates from 1841 in Victoria; 1854 in Queensland; 1840 in South Australia; 1863 in Western Australia (a Savings Bank was opened in 1856 but was closed a year later); 1835 in Launceston; and 1845 in Hobart. These early banks functioned as Trustee Savings Banks, but, with the exception of the Hobart and Launceston institutions, were later absorbed by, or amalgamated with, Government Savings Banks.

Post Office Savings Banks were established in all States from 1864 onwards. These were separate Government institutions except in South Australia, where the Post Office acted as agent for the Savings Bank. Since the federation of the Australian States in 1900, post offices have been controlled by the Commonwealth Government, but they continued to act as savings bank agencies for the State institutions until the establishment of the Commonwealth Bank in 1912. They now act as agents for the Commonwealth Savings Bank.

Savings banks at present operating are the Commonwealth Savings Bank (all States and Territories); State Savings Bank of Victoria; Savings Bank of South Australia; and the two Trustee Banks—Hobart and Launceston.

2. **Extension of Facilities.**—The prime object of the foundation of savings banks in Australia was the encouragement of thrift, deposits of one shilling and upwards being accepted; nevertheless the facilities offered, while preserving the original object, have led to developments in another direction. Although depositors may not operate on their accounts by means of cheques, they have practically all the other advantages of a current account and in addition receive interest on their minimum monthly balances. No charge is made by the banks for keeping the accounts.

3. **Statistical Returns.**—Commencing with July, 1931, monthly returns have been furnished by savings bank authorities. The information given in the following paragraphs relates to the deposits at 30th June in each year. For convenience of reference the information has been grouped under the following headings:—

(i) All Savings Banks; (ii) Commonwealth Savings Bank; and (iii) State Savings Banks (including Trustee Banks in Tasmania).

4. **Number of Accounts.**—The following table shows the number of savings bank accounts in existence at 30th June, 1948 and 1949. It should be noted that these figures relate to the number of accounts and not necessarily to the number of depositors.

ALL SAVINGS BANKS : NUMBER OF ACCOUNTS.(a)

Bank.	30th June, 1948.		30th June, 1949.	
	Operative.	Inoperative. (b)	Operative.	Inoperative. (b)
Commonwealth Savings Bank ..	3,753,954	1,706,425	3,871,224	1,759,461
State Savings Bank of Victoria ..	1,304,082	520,325	1,388,057	529,513
Savings Bank of South Australia ..	473,613	140,020	486,043	143,208
Hobart Savings Bank ..	77,668	(c) 28,587	80,472	(c) 29,618
Launceston Bank for Savings ..	59,603	21,874	63,656	21,471
Total	5,728,020	2,417,231	5,890,352	2,483,271

(a) Excludes special purpose and school bank accounts.

(b) Inoperative accounts are those accounts with balances of less than £1 which have not been operated on for a period of over two years.

(c) Estimated.

5. **All Savings Banks.**—(i) *Particulars for Years 1947-48 and 1948-49.* The following statement gives details of the business transacted by all savings banks for the years 1947-48 and 1948-49:—

ALL SAVINGS BANKS : PARTICULARS.

(£'000.)

State or Territory.	Amount on Deposit at 30th June, 1947.	1947-48.			1948-49.		
		Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at end of year.	Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at end of year.
New South Wales ..	231,368	1,788	3,808	236,964	3,637	3,882	244,483
Victoria ..	216,107	6,559	3,735	226,401	8,956	3,889	239,246
Queensland ..	85,602	-2,143	1,377	84,836	1,226	1,380	87,442
South Australia ..	67,900	4,357	1,356	73,613	6,086	1,464	81,163
Western Australia ..	36,625	-1,037	595	36,183	755	597	37,535
Tasmania ..	20,856	318	398	21,572	428	413	22,413
Northern Territory ..	537	104	8	649	68	9	726
Australian Capital Territory ..	1,020	63	17	1,100	92	19	1,211
Total ..	660,015	10,009	11,294	681,318	21,248	11,653	714,219

NOTE.—Minus sign (—) indicates excess of withdrawals over deposits.

(ii) *Deposits.* (a) *30th June, 1939 and 1945 to 1949.* The following table shows for all savings banks the amount at credit of depositors and the average deposits per head of population at 30th June, 1939 and 1945 to 1949:—

ALL SAVINGS BANKS : DEPOSITS.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
TOTAL.									
(£'000.)									
1939	87,474	80,461	29,045	37,397	12,396	8,396	99	319	245,587
1945	198,203	182,149	80,094	(a) 56,995	31,763	16,914	(b)	846	566,964
1946	236,242	211,326	90,063	65,865	33,289	20,447	349	973	663,554
1947	231,368	216,107	85,602	67,900	30,625	20,856	537	1,020	660,015
1948	236,964	226,401	84,836	73,613	36,183	21,572	649	1,100	681,318
1949	244,483	239,246	87,442	81,163	37,535	22,413	726	1,211	714,219

PER HEAD OF POPULATION.

(£ s. d.)

1939	31 16 7	42 16 8	28 10 7	45 18 6	26 7 5	35 1 5	15 14 8	25 7 4	35 4 11
1945	67 18 4	90 15 2	74 7 2	98 7 2	65 2 7	68 0 6	(b)	56 6 6	76 14 1
1946	80 4 6	104 7 0	82 13 3	103 15 0	77 14 10	81 2 10	33 1 2	61 6 1	88 17 9
1947	77 10 3	105 3 6	77 7 5	105 1 11	72 17 9	81 2 7	40 7 11	60 7 6	87 7 7
1948	78 6 6	108 5 10	75 5 1	111 17 5	70 4 4	82 4 5	52 1 2	58 12 1	88 7 4
1949	78 10 5	111 16 10	75 19 9	120 11 9	70 9 4	83 4 0	52 12 7	62 13 2	90 5 5

(a) Includes deposits transferred from Northern Territory.

(b) Included with South Australia.

(b) *Deposits per head and Purchasing Power.* Particulars of the deposits per head of population, actual and adjusted to purchasing power by the application of retail price index-numbers, at 30th June in each year from 1937 to 1949, are given in the following table. In calculating the index-numbers in this table the average of deposits per head of population at 30th June, 1937, 1938 and 1939 has been used as a base and made equal to 1,000.

ALL SAVINGS BANKS: DEPOSITS PER HEAD OF POPULATION.

At 30th June—				Actual.		Adjusted to Purchasing Power.(a)	
				Deposits per head of population.	Index-Number.	Deposits per head of population.	Index-Number
				£	1937-1939 = 1000	£	1937-1939 = 1000
1939	..	..	..	35.25	1018	34.32	991
1940	..	..	..	33.67	972	31.51	910
1941	..	..	..	35.48	1025	31.68	915
1942	..	..	..	38.20	1103	31.55	911
1943	..	..	..	49.48	1429	38.66	1117
1944	..	..	..	64.51	1863	51.20	1479
1945	..	..	..	76.70	2215	60.89	1758
1946	..	..	..	88.89	2567	69.32	2002
1947	..	..	..	87.08	2515	66.24	1913
1948	..	..	..	88.37	2552	61.75	1783
1949	..	..	..	90.27	2607	57.46	1659

(a) On the basis of the All Items ("C") Series of Retail Price Index-numbers (6 capitals) for June quarter in each year. (Base: average of June quarters, 1937, 1938 and 1939 = 1,000.)

In interpreting the figures above it should be remembered that savings bank accounts are used to some extent by institutions and business people, as well as by individuals for the investment of personal savings. The relative extent to which savings bank accounts are used for business purposes, etc., may, and probably does fluctuate considerably from time to time.

6. *War Savings and Savings Certificates.*—Sales of savings certificates and stamps under the War Savings and Savings Certificate schemes, particulars of which were given in earlier issues of the Official Year Book (see No. 37, page 586), were discontinued after 31st January, 1949, except for some sales made to wind up savings groups, etc. This method of saving was replaced by special savings schemes to operate through the savings banks. Employers were asked to co-operate by forming employee savings groups and by making regular deductions from wages and salaries for payment into group savings bank accounts, and thence, at the end of each quarter to individual accounts. The total value of certificates outstanding at 30th June in each of the last five years was:—1945, £52,534,000; 1946, £54,677,000; 1947, £59,526,000; 1948, £64,483,000 and 1949, £62,198,000.

7. *Commonwealth Savings Bank.*—(i) *General.* The Savings Bank Department of the Commonwealth Bank opened for business in Victoria on 15th July, 1912; in Queensland on 16th September, 1912; in the Northern Territory on 21st October, 1912; and in New South Wales, South Australia and Western Australia on 13th January, 1913. The Tasmanian State Savings Bank was absorbed by the Commonwealth Bank in January, 1913, the Queensland State Savings Bank was taken over in 1920 and the New South Wales and Western Australian State Savings Banks in 1931. The Savings Bank Department was separated from the General Bank on 9th June, 1928, and established as a

separate institution known as the "Commonwealth Savings Bank". It has since then operated independently, publishing its own balance-sheets and profit and loss accounts. The Commonwealth Bank Act 1927, which provided for the establishment of the Commonwealth Savings Bank as a separate institution, provided for a Commission of three members to manage the Savings Bank. This Commission was never appointed and the Commonwealth Bank Act 1945 placed the control of the Commonwealth Savings Bank under the Governor of the Commonwealth Bank.

(ii) *Particulars for Years 1947-48 and 1948-49.* Particulars for the States and Territories for the years 1947-48 and 1948-49 are shown in the table below:—

COMMONWEALTH SAVINGS BANK : PARTICULARS.
(£'000.)

State or Territory.	Amount on Deposit at 30th June, 1947.	1947-48.			1948-49.		
		Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at end of year.	Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at end of year.
New South Wales	231,368	1,788	3,808	236,964	3,637	3,882	244,483
Victoria ..	47,959	—112	773	48,620	2,464	803	51,887
Queensland ..	85,602	—2,143	1,377	84,836	1,226	1,380	87,442
South Australia ..	12,892	—111	212	12,993	1,370	224	14,587
Western Australia ..	36,625	—1,037	595	36,183	755	597	37,535
Tasmania ..	7,947	—53	134	8,028	196	138	8,362
Northern Territory ..	537	104	8	649	68	9	726
Australian Capital Territory ..	1,020	63	17	1,100	92	19	1,211
Total ..	423,950	—1,501	6,924	429,373	9,808	7,052	446,233

NOTE.—Minus sign (—) indicates excess of withdrawals over deposits.

(iii) *Deposits—30th June, 1939 and 1945 to 1949.* The amount on deposit with the Commonwealth Savings Bank in each State, in the Territories of Papua and New Guinea, and in London at 30th June in each of the years 1939 and 1945 to 1949 was as follows:—

COMMONWEALTH SAVINGS BANK : DEPOSITS, 30th JUNE.
(£'000.)

Place of Deposit.	1939.	1945.	1946.	1947.	1948.	1949.
New South Wales ..	87,474	198,203	236,242	231,368	236,964	244,483
Victoria ..	11,242	38,933	47,603	47,959	48,620	51,887
Queensland ..	29,045	80,094	90,063	85,602	84,836	87,442
South Australia ..	3,167	10,505	12,665	12,892	12,993	14,587
Western Australia ..	12,396	31,763	38,289	36,625	36,183	37,535
Tasmania ..	2,358	6,006	7,851	7,947	8,028	8,362
Northern Territory ..	99	(a)	349	537	649	726
Australian Capital Territory ..	319	846	973	1,020	1,100	1,211
Total ..	146,100	366,350	434,035	423,950	429,373	446,233
Papua and New Guinea (b) ..	209	86	303	750	1,047	1,356
London (b) ..	571	573	661	750	797	768
Grand Total ..	146,880	367,009	434,999	425,450	431,217	448,357

(a) Included with South Australia.

(b) Not included in the figures given in paras. 5 (i) and (ii) and 7 (ii).

(iv) *Balance-sheet, 30th June, 1948 and 1949.* Particulars of the liabilities and assets of the Commonwealth Savings Bank as at 30th June, 1948 and 1949 were as follows :—

COMMONWEALTH SAVINGS BANK(a) : BALANCE-SHEET, 30th JUNE.
(£'000.)

Liabilities.	1948.	1949.	Assets.	1948.	1949.
Reserve Fund ..	5,443	5,863	Cash Balances and Money at Short Call	42,684	45,576
Depositors' Balances and Accrued Interest	431,833	448,995	Australian Notes and Coin	493	501
Contingency Account and other Liabilities	13,249	13,839	Government Securities	369,614	375,765
			Securities of Municipal and Other Public Authorities ..	30,875	31,269
			Bank Premises ..	611	784
			Other Assets ..	6,248	14,802
Total ..	450,525	468,697	Total ..	450,525	468,697

(a) Includes London and Territories of Papua and New Guinea branches.

(v) *Profits.* Under the terms of the Savings Bank Amalgamation Agreements the profits of the Commonwealth Savings Bank in New South Wales, Queensland, Western Australia and Tasmania are equally divided between the Bank and the former controlling authorities in those States. Net profits for the years ended 30th June, 1939 to 1949 and the distribution of those profits are shown in the following table :—

COMMONWEALTH SAVINGS BANK : DISTRIBUTION OF PROFITS.
(£.)

Year ended 30th June—	Total Profit.	Payments to State Authorities under Savings Bank Amalgamation Agreements.					Published Profit.	Distribution of Published Profit.	
		New South Wales. (a)	Queensland. (b)	Western Australia. (b)	Tasmania. (b)	Total.		National Debt Sinking Fund.	Savings Bank Reserve Fund.
1939 ..	532,736	168,878	30,464	13,251	3,861	216,454	316,282	158,141	158,141
1940 ..	632,531	195,549	41,466	18,495	4,079	259,589	372,942	186,471	186,471
1941 ..	644,812	192,110	43,579	17,060	4,611	257,360	387,452	193,726	193,726
1942 ..	609,286	178,078	41,215	16,351	3,988	240,532	368,754	184,377	184,377
1943 ..	653,341	189,091	48,108	19,479	3,973	260,741	392,600	196,300	196,300
1944 ..	848,934	226,020	86,226	32,498	5,408	350,152	498,782	249,391	249,391
1945 ..	1,403,029	383,675	152,373	54,486	10,321	600,855	802,174	401,087	401,087
1946 ..	1,511,858	395,379	174,485	59,997	11,080	640,950	870,908	435,454	435,454
1947 ..	1,526,566	397,385	175,229	61,215	12,043	645,872	880,694	440,347	440,347
1948 ..	1,536,398	421,221	176,453	40,410	12,471	650,555	885,843	442,922	442,921
1949 ..	1,438,579	420,096	152,302	19,261	9,001	600,660	837,919	418,959	418,960

(a) Paid to Rural Bank of New South Wales.

(b) Paid to State Consolidated Revenue Funds.

8. *State Savings Banks.*—(i) *Particulars for Years 1947-48 and 1948-49.* Particulars of the transactions of all State savings banks for the years 1947-48 and 1948-49 are given hereunder. Throughout the following tables the figures for Tasmania refer to the Trustee Savings Banks in Hobart and Launceston. Although the accounts of these institutions are made up for half-yearly periods ending 28th February and 31st August, the managements have furnished particulars of deposits as at 30th June.

STATE SAVINGS BANKS : PARTICULARS.
(£'000.)

State.	Amount on Deposit at 30th June, 1947.	1947-48.			1948-49.		
		Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at end of year.	Excess of Deposits over Withdrawals during year.	Interest added during year.	Amount on Deposit at end of year.
Victoria ..	168,148	6,671	2,962	177,781	6,492	3,086	187,359
South Australia ..	55,008	4,468	1,144	60,620	4,716	1,240	66,576
Tasmania ..	12,909	371	264	13,544	232	275	14,051
Total ..	236,065	11,510	4,370	251,945	11,440	4,601	267,986

NOTE.—The State savings banks in New South Wales, Queensland, Western Australia and Tasmania were absorbed by the Commonwealth Savings Bank.

(ii) *Deposits*—30th June, 1939 and 1945 to 1949. The following statement shows the amount on deposit with State savings banks at 30th June in each of the years 1939 and 1945 to 1949 :—

STATE SAVINGS BANKS : DEPOSITS AT 30th JUNE.
(£'000.)

State.	1939.	1945.	1946.	1947.	1948.	1949.
Victoria ..	69,219	143,216	163,723	168,148	177,781	187,359
South Australia ..	24,230	46,490	53,200	55,008	60,620	66,576
Tasmania ..	6,038	10,908	12,596	12,909	13,544	14,051
Total ..	99,487	200,614	229,519	236,065	251,945	267,986

(iii) *Assets*, 30th June, 1949. At 30th June, 1949 the assets of all State savings banks amounted to £285,042,347, distributed as shown hereunder :—

STATE SAVINGS BANKS : ASSETS, 30th JUNE, 1949.
(£.)

Particulars.	Victoria.	South Australia.	Tasmania. (a)	Total.
Cash in hand, in transit and on Current Account	9,273,821	1,479,018	627,579	11,380,418
Fixed Deposits	34,307,000	12,426,000	1,575,000	48,308,000
Outstanding Interest, Dividends and Rents	1,275,471	435,109	145,822	1,856,402
Government Securities	122,107,124	47,390,560	8,261,248	177,758,932
Municipal and Other Public Securities	29,337,348	3,050,419	2,879,378	35,267,145
Mortgages	1,454,524	5,885,575	1,927,222	9,267,321
Landed and House Property	752,364	380,303	39,185	1,171,852
All other Assets	23,555	..	8,722	32,277
Total Assets	198,531,207	71,046,984	15,464,156	285,042,347

(a) At 31st August, 1949. See par. 8 (i).

At 30th June, 1948 the assets of the State savings banks amounted to £268,070,000, of which £171,694,000 was in Government securities, £25,020,000 in municipal and other public securities and £48,058,000 in fixed deposits. State totals were Victoria, £188,537,000; South Australia, £64,833,000; and Tasmania, £14,700,000.

(iv) *Profit and Loss Accounts, 1948-49.* Details of the profit and loss accounts of the several State savings banks for the year 1948-49 are given below :—

STATE SAVINGS BANKS : PROFIT AND LOSS ACCOUNTS, 1948-49.

(£.)

Particulars.	Victoria.	South Australia.	Tasmania. (a)	Total.
Receipts—				
Total—Interest, Dividends, Rents, and all other ..	4,717,508	1,868,923	452,088	7,038,519
Expenditure—				
Interest allotted to Depositors ..	2,837,785	1,159,703	283,712	4,281,200
Provision for accrued interest on Depositors' Balances ..	272,597	85,000	..	357,597
Expenses of Management ..	1,108,252	376,313	80,746	1,565,311
All other Expenditure ..	194,265	43,893	20,992	259,150
Total	4,412,899	1,664,909	385,450	6,463,258
Profit for year	304,609	204,014	66,638	575,261
Balance of profit and loss account brought forward	156,674	137,240	105,261	399,175
Total	461,283	341,254	171,899	974,436
Distribution of Profits—				
Amount written off Bank Premises	24,000	6,934	4,454	35,388
Amount carried to Reserves and Depreciation Funds ..	288,427	200,000	62,000	550,427
Balance of Profit and Loss Ac- count carried forward ..	148,856	134,320	105,445	388,621

(a) Year ended 31st August, 1949. See par. 8 (i).

In 1947-48 total receipts were £6,501,000 and expenditure, £6,022,000. Net profits amounted to £479,000.

9. *Classification of Depositors' Balances.*—The classification of deposits published by savings banks does not permit a fully detailed analysis with respect to Australia as a whole, but information supplied to the Royal Commission on Monetary and Banking Systems for all savings banks except the Hobart Trustee Savings Bank shows that at 30th June, 1936 the amount on deposit in accounts with balances of less than £100 represented 21 per cent. of the total deposits; balances of over £100 but under £250, 21 per cent.; over £250 but under £500, 23 per cent.; over £500 but under £1,000, 25 per cent.; while those of over £1,000 accounted for 10 per cent. School, penny bank and small inoperative accounts were excluded in determining these percentages.

A similar classification as at 30th June, 1936, 1939 and 1945 to 1949, but relating only to the combined State Savings Banks of Victoria and South Australia, is shown below.

STATE SAVINGS BANKS : CLASSIFICATION OF DEPOSITS.

(Per cent.)

At 30th June—	£100 and Under.	£101-£300.	£301-£500.	Total under £501.	£501-£1,000.	Over £1,000.
1936.. ..	19.54	26.13	17.84	63.51	27.42	9.07
1939.. ..	20.27	27.15	17.90	65.32	26.14	8.54
1945.. ..	13.61	28.78	21.22	63.61	27.80	8.59
1946.. ..	11.77	25.84	21.46	59.07	30.71	10.22
1947.. ..	11.51	23.40	20.53	55.44	32.45	12.11
1948.. ..		52.72		52.72	32.74	14.54
1949.. ..		50.11		50.11	33.14	16.75

10. **Rates of Interest on Deposits.**—The following tables show the rates of interest allowed at 30th June, 1939 to 1949 by State and trustee savings banks and by the Commonwealth Savings Bank.

STATE AND TRUSTEE SAVINGS BANKS : INTEREST RATES(a) ON DEPOSITS, 30th JUNE.

(Per cent.)

Savings Bank—			State Savings Bank of Victoria.			Savings Bank of South Australia.			The Hobart Savings Bank.		The Launceston Bank for Savings.		
Interest-bearing Limit—			£1,000.			£1,000.			£300.		£300.		
Part of balance—			£1 to £500.	£501 to £1,000.	De-posit Stock.	£1 to £200.	£201 to £500.	£501 to £1,000.	De-posit Stock.	£1 to £300.	De-posit fixed for twelve months.	£1 to £300.	De-posit fixed for twelve months.
1939	..	..	2	2	2½	3	2½	2½	..	3	3½	3	3½
1940	..	..	2	2	2½	2½	2½	2½	..	3	3½	3	3½
1941	..	..	2	2	2½	2½	2½	2½	..	2½	3½	2½	3½
1942	..	..	2	1½	1½	2½	2½	1½	..	2½	2½	2½	2½
1943	..	..	2	1½	1½	2½	2½	1½	..	2½	2½	2½	2½
1944	..	..	2	1½	1½	2½	2½	1½	..	2½	2½	2½	2½
1945	..	..	2	1½	1½	2½	2½	1½	..	2½	2½	2½	2½
1946	..	..	2	I	I	2½	2½	1½	..	2½	2½	2½	2½
1947	..	..	2	I	I	2½	2½	1½	..	2½	2½	2½	2½
1948	..	..	2	I	I	2½	2½	1½	..	2½	2½	2½	2½
1949	..	..	2	I	I	2½	2½	1½	I	2½	2½	2½	2½

(a) Rates on ordinary accounts. On Friendly and other Society Accounts the rates at 30th June, 1949 were—State Savings Bank of Victoria, 2 per cent. on first £2,000, 1 per cent. on balance; Savings Bank of South Australia, 2½ per cent. on first £500, 2 per cent. on next £1,500 and 1 per cent. on the balance.

COMMONWEALTH SAVINGS BANK : INTEREST RATES(a) ON DEPOSITS, 30th JUNE.

(Per cent.)

Part of balance—		£1 to £500.	£501 to £1,000.(b)	Part of balance—		£1 to £500.	£501 to £1,000.(b)
1939	.. ..	2	1½	1944	.. ..	2	1½
1940	.. ..	2	1½	1945	.. ..	2	1½
1941	.. ..	2	1½	1946	.. ..	2	1
1942	.. ..	2	1½	1947	.. ..	2	1
1943	.. ..	2	1½	1948	.. ..	2	1
				1949	.. ..	2	1

(a) Rates on ordinary accounts. On Friendly and other Society Accounts the rates at 30th June, 1949 were 2 per cent. on first £2,000 and 1 per cent. on the balance. (b) Up to 1941 the interest-bearing limit in all States except Queensland was £1,300. In Queensland it was £2,000. The limit since 1942 has been £1,000 in all States.

C. COMPANIES.

NOTE.—Statistics available in regard to registered companies relate to (a) Trustees, Executors and Agency Companies; (b) Registered Building and Investment Societies; and (c) Registered Co-operative Societies.

§ 1. Trustees, Executors and Agency Companies.

The following table shows, for the years 1939 and 1944 to 1948, particulars of the assets and liabilities of certain trustee companies transacting business in Australia and New Zealand. Figures for the year 1939 were obtained from returns supplied to the Commonwealth Bureau of Census and Statistics, while those for the years 1944 to 1948 have been extracted from a summary of the last published balance-sheets as shown in the *Australasian Insurance and Banking Record*. Individual items are therefore not entirely comparable. Details of assets of trust funds administered are shown for the year 1939, but for the years 1944 to 1948 totals for nine only of the 23 offices are available.

TRUSTEES, EXECUTORS AND AGENCY COMPANIES, AUSTRALIA.

Particulars.	1939.	1944.	1945.	1946.	1947.	1948.
Number of Companies ..	£ 20	£ 23	£ 23	£ 23	£ 23	£ 23
Liabilities—						
Capital paid-up ..	1,312,202	1,408,452	1,408,452	1,408,452	1,408,452	1,408,452
Reserves and undistributed Profits ..	1,235,750	1,327,604	1,331,200	1,344,572	1,381,156	1,415,774
Other Liabilities ..	150,960	618,991	714,707	825,455	891,026	954,475
Total Liabilities ..	2,698,912	3,355,047	3,454,359	3,578,479	3,680,634	3,778,701
Assets—						
Government and Municipal Securities ..	730,935	11,060,194	11,092,487	11,060,516	11,173,982	11,236,679
Loans on Mortgage ..	397,944	493,838	488,576	513,044	493,918	618,962
Other Loans and Advances ..	75,141	(b)	(b)	(b)	(b)	(b)
Real Property ..	1,148,566	1,080,768	1,080,556	1,075,552	1,070,443	929,664
Deposits in Banks ..	147,717	(c)155,957	(c)238,395	(c)326,148	(c)249,189	(c)241,464
Other Assets ..	198,609	564,290	554,345	603,219	684,102	751,932
Total Assets ..	2,698,912	3,355,047	3,454,359	3,578,479	3,680,634	3,778,701
Assets of Trust Funds Administered—(d)	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Australian Government and Municipal Securities ..	68,515	} Not available				
British and Foreign Government and Municipal Securities ..	1,342					
Loans on Mortgage ..	30,977					
Other Loans and Advances ..	2,713					
Shares in Companies ..	59,351					
Real Property ..	51,732					
Deposits in Banks ..	8,958					
Other Assets ..	13,409					
Total Trust Fund Assets ..	236,997	(e)171,683	(e)175,216	(e)179,035	(e)183,138	(e)187,044

(a) Includes fixed deposits and deposits with Government. (b) Included with other assets.
 (c) Cash. (d) Includes particulars of trust funds administered by Public Trustees in 1939 only.
 (e) Nine offices only.

§ 2. Registered Building and Investment Societies.

1. Summary.—During 1948 returns were received from 635 societies, but the information is not exhaustive, as particulars regarding unimportant organizations are not included. In the following table general information is given relating to the societies for the year 1948.

REGISTERED BUILDING AND INVESTMENT SOCIETIES : SUMMARY, 1948.

Particulars.		N.S.W.	Vic. (a)	Q'land.	S. Aust. (a)	W.Aust.	Tas.	Total.
Societies making returns—								
Permanent ..	No.	23	22	6	5	7	5	68
Terminating ..	No.	542	2	4	17	2	..	567
Total		565	24	10	22	9	5	635
Number of shareholders ..		85,296	11,825	21,249	20,815	20,519	6,749	166,453
.. shares ..		61,124,703	890,473	4,543,200	87,030	(c)	55,129	6,700,535
.. borrowers ..		(d) 8,255	14,360	8,538	3,343	3,497	2,068	40,061
Income for year from interest, etc. ..	£	384,980	403,853	120,430	50,961	97,551	49,697	1,107,481
Working expenses for year ..	£	266,052	252,242	169,114	21,372	18,572	9,907	737,859
Amounts of deposits during year ..	£	783,259	1,223,021	64,432	281,233	242,963	6,950	2,601,858
Repayments of loans during year ..	£	787,678	1,396,018	821,702	216,778	326,475	197,673	3,746,324
Loans granted during year ..	£	1,961,222	2,350,105	1,085,777	350,463	385,662	371,300	6,504,529

(a) Calendar year—others financial year. (b) Terminating societies only—Starr-Bowkett Societies, 428,665, and other terminating societies, 696,038. (c) Not available. (d) Permanent societies only. (e) Incomplete—other terminating societies not available.

2. Liabilities and Assets.—Particulars of liabilities and assets in 1948 of the 635 societies mentioned in the previous paragraph are shown below.

REGISTERED BUILDING AND INVESTMENT SOCIETIES : LIABILITIES, 1948.

(£.)

State.	Paid-up Capital and Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and other Liabilities.	Total Liabilities
New South Wales ..	8,387,804	1,190,295	761,516	15,312,277	25,651,892
Victoria ..	2,890,027	1,153,880	3,472,310	431,042	7,947,259
Queensland ..	2,450,336	82,283	18,827	113,046	2,664,492
South Australia ..	1,142,231	176,633	148,857	12,604	1,480,325
Western Australia ..	1,145,637	55,008	77,034	(a) 120,733	1,398,412
Tasmania ..	613,369	133,739	202,577	32,924	982,609
Total	16,629,404	2,791,838	4,681,121	16,022,626	40,124,989

(a) Includes net accumulated profits, £51,071.

REGISTERED BUILDING AND INVESTMENT SOCIETIES : ASSETS, 1948.

(£.)

State.	Advances on Mortgage.	Landed and House Property, Furniture, etc.	Cash in Hand and on Deposit.	Other Assets.	Total Assets.
New South Wales ..	24,151,016	(a)	498,426	1,002,450	25,651,892
Victoria ..	7,383,724	216,422	16,983	330,130	7,947,259
Queensland ..	2,576,502	17,710	24,548	45,732	2,664,492
South Australia ..	1,211,807	48,590	119,426	100,502	1,480,325
Western Australia ..	1,202,347	13,285	103,870	78,910	1,398,412
Tasmania ..	861,573	9,507	5,898	105,631	982,609
Total	37,386,969	305,514	769,151	1,663,355	40,124,989

(a) Not available.

§ 3. Co-operative Societies.

1. **General.**—Returns relating to co-operative societies are divided into three classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements; (ii) those engaged in retailing general household requirements; and (iii) those engaged in activities covered by both classes (i) and (ii). The first class may be described briefly as Producers' Co-operative Societies and the second as Consumers' Co-operative Societies. The particulars given for New South Wales relate to societies registered under the Co-operation Act 1923-1945. A summary of the business of co-operative societies for the year 1948 for all States except Western Australia is given in the following table. For Western Australia details of the business during 1940-41 (the latest year available) are given.

CO-OPERATIVE SOCIETIES: SUMMARY.

Particulars.	N.S.W. 1947-48. (a)	Vic. 1947-48.	Q'land. 1947-48.	S. Aust. 1948.	W. Aust. 1940-41.	Tas. 1947-48.
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PRODUCERS' SOCIETIES.

Number of Societies ..	190	54	124	44	37	12
" Branches ..	(b)	30	68	13	24	16
" Members ..	79,591	38,885	78,215	9,880	13,073	10,312
Gross Turnover (Sales) ..	£ 32,056,483	6,380,340	18,966,859	2,954,651	1,752,805	1,275,439
Other Income ..	£ 637,433	432,017	558,705	115,700	664,919	30,594
Total Income ..	£ 32,693,916	6,812,357	19,525,564	3,070,351	2,417,724	1,306,033
Total Purchases during Year ..	£ 28,133,254	5,274,519	16,034,046	2,209,097	1,570,626	978,225
Other Expenditure ..	£ 4,659,851	1,364,106	3,147,127	732,508	720,602	367,709
Total Expenditure ..	£ 32,793,105	6,638,625	19,181,173	2,941,605	2,291,228	1,345,934
Rebates and Bonuses ..	£ ..	12,573	148,503	(c) 275,952	2,363	9,646
Dividends on Share Capital ..	£ 48,669	22,317	65,881	11,552	13,114	12,694

CONSUMERS' SOCIETIES.

Number of Societies ..	73	28	37	16	5	1
" Branches ..	(b)	16	14	191	(b)	2
" Members ..	67,795	15,369	13,410	72,917	2,715	425
Gross Turnover (Sales) ..	£ 5,341,965	1,405,094	1,430,120	2,615,000	171,758	77,331
Other Income ..	£ 101,679	83,484	29,100	46,848	3,587	196
Total Income ..	£ 5,443,644	1,488,578	1,459,220	2,661,848	175,345	77,527
Total Purchases during Year ..	£ 4,377,461	1,236,791	1,322,872	2,171,019	140,944	64,707
Other Expenditure ..	£ 836,967	253,492	213,250	448,194	32,307	11,389
Total Expenditure ..	£ 5,214,428	1,490,283	1,536,122	2,619,213	173,251	76,096
Rebates and Bonuses ..	£ 331,760	42,617	40,818	73,559	862	1,760
Dividends on Share Capital ..	£ 31,962	7,038	2,623	26,235	1,583	..

SOCIETIES WHICH ARE BOTH PRODUCERS' AND CONSUMERS'.

Number of Societies ..	..	10	3	10	43	..
" Branches ..	..	6	10	2	12	..
" Members ..	..	4,160	4,778	1,673	5,875	..
Gross Turnover (Sales) ..	£ ..	1,963,554	1,554,588	395,928	624,213	..
Other Income ..	£ ..	12,395	5,006	229,437	29,943	..
Total Income ..	£ ..	1,975,949	1,559,594	625,365	654,156	..
Total Purchases during Year ..	£ ..	1,690,643	1,352,840	445,390	542,849	..
Other Expenditure ..	£ ..	260,748	183,654	154,792	97,832	..
Total Expenditure ..	£ ..	1,951,391	1,536,494	600,182	640,681	..
Rebates and Bonuses ..	£ ..	11,023	4,276	45,063	12,247	..
Dividends on Share Capital ..	£ ..	3,442	2,288	3,292	4,400	..

(a) Particulars relate to societies registered under the Co-operation Act 1923-1945. Particulars shown under Producers' Societies refer to Rural Societies, and under Consumers' to Trading Societies.
 (b) Not available. (c) Increase is due to change in method of calculating bonuses of co-operative wineries. Purchases have been calculated by applying average price paid by non-co-operative wineries to tonnage of fruit delivered. Surplus of sales (less other expenditure) over this has been treated as bonuses and rebates.

2. **Liabilities and Assets.**—The next table shows the liabilities and assets for the same years for which information is available :—

CO-OPERATIVE SOCIETIES: LIABILITIES AND ASSETS.

(£)

Particulars.	N.S.W. 1947-48. (a)	Vic. 1947-48.	Q'land. 1947-48.	S. Aust. 1948.	W. Aust. 1940-41.	Tas. 1947-48.
PRODUCERS' SOCIETIES.						
Liabilities—						
Paid-up Capital	1,734,998	964,398	2,198,357	265,579	272,932	191,374
Loan Capital	(b)	61,494	572,322	369,419	210,260	28,079
Bank Overdrafts	2,408,035	613,670	1,541,601	125,972	24,777	195,648
Accumulated Profits	(b)	219,122	502,415	98,467	6,906	55,540
Reserve Funds	1,988,680	534,571	2,087,881	262,391	208,812	73,131
Sundry Creditors	3,246,210	765,492	2,692,006	222,996	302,753	204,559
Other Liabilities		147,664	202,830	995,705	455,490	9,338
Total Liabilities	9,377,923	3,306,411	9,797,412	2,340,529	1,481,930	757,669
Assets—						
Land and Buildings	3,792,555	1,338,053	1,791,390	306,832	420,964	206,329
Machinery, Plant and other fixed Assets						
Stocks	2,158,201	638,359	1,490,613	347,654	216,520	111,703
Sundry Debtors	2,104,444	983,580	2,381,184	848,482	162,952	229,003
Cash in hand and on deposit .. ..	..	91,977	520,150	326,372	369,605	160,718
Profit and Loss Account .. ..	..	1,029	29,507	176,356	165,945	11,223
Other Assets	1,322,723	253,413	363,656	15,632	44,723	1,895
Total Assets	9,377,923	3,306,411	9,797,412	2,340,529	1,481,930	757,669

CONSUMERS' SOCIETIES.

Liabilities—						
Paid-up Capital	1,296,869	349,479	141,134	754,672	37,425	16,121
Loan Capital	(b)	41,808	30,364	130,614	..	900
Bank Overdrafts	122,462	139,123	139,405	24,103	4,008	2,417
Accumulated Profits	(b)	77,246	14,087	121,625	4,019	3,686
Reserve Funds	636,997	114,050	52,134	228,375	5,035	7,103
Sundry Creditors	559,792	93,834	197,988	81,847	15,096	3,453
Other Liabilities		55,535	31,489	11,277	471	2,948
Total Liabilities	2,616,120	871,075	606,661	1,352,513	66,054	36,628
Assets—						
Land and Buildings	634,683	394,619	70,687	292,109	10,002	11,819
Machinery, Plant and other fixed Assets						
Stocks	870,691	240,956	43,569	86,317	6,795	1,307
Sundry Debtors	335,323	97,229	308,853	673,352	27,555	17,417
Cash in hand and on deposit .. ..	..	32,756	98,203	66,734	10,231	6,012
Profit and Loss Account .. ..	..	34,600	20,234	46,059	7,487	73
Other Assets	775,423	70,915	4,732	1,229	1,244	..
Total Assets	2,616,120	871,075	606,661	1,352,513	66,054	36,628

SOCIETIES WHICH ARE BOTH PRODUCERS' AND CONSUMERS'.

Liabilities—						
Paid-up Capital .. ..	..	77,507	99,607	74,970	158,787	..
Loan Capital .. ..	..	17,146	..	116,096	14,749	..
Bank Overdrafts .. ..	..	71,972	110,898	132,865	32,602	..
Accumulated Profits .. ..	..	56,282	10,684	810	11,889	..
Reserve Funds .. ..	..	86,366	57,876	112,358	108,408	..
Sundry Creditors .. ..	..	110,832	120,429	45,275	56,684	..
Other Liabilities .. ..	..	29,783	4,105	202,839	1,410	..
Total Liabilities .. ..	..	449,888	409,599	686,113	384,530	..
Assets—						
Land and Buildings .. ..	..	210,436	100,443	115,300	79,313	..
Machinery, Plant and other fixed Assets .. ..	..				
Stocks .. ..	..	109,906	100,157	73,465	23,828	..
Sundry Debtors .. ..	..	81,289	115,403	209,424	160,930	..
Cash in hand and on deposit .. ..	..	4,112	76,344	74,860	88,772	..
Profit and Loss Account .. ..	..	..	1,296	8,788	17,951	..
Other Assets .. ..	..	14	..	..	4,058	..
Total Assets .. ..	..	449,888	409,599	686,113	384,530	..

(a) Particulars relate to societies registered under the Co-operation Act 1923-1945. Particulars shown under Producers' Societies refer to Rural Societies and under Consumers' to Trading Societies.

(b) Not available.

D. INSURANCE.

§ 1. Insurance—General.

1. **Legislation.**—Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate in regard to “insurance other than State insurance; also State insurance extending beyond the limits of the State concerned”. Legislation by the Commonwealth Parliament includes the Life Assurance Companies Act 1905 limiting the amount of assurance payable on the death of children, the Marine Insurance Act 1900 defining the limits of marine insurance and regulating the terms of contracts, etc., the Insurance Act 1932–1937, requiring the lodgment of deposits by insurance companies, and the Life Insurance Act 1945, generally regulating life insurance business in Australia. The Life Assurance Companies Act 1905 was repealed by the Life Insurance Act 1945 which incorporated the provisions of that Act. These laws have limited application, and, except for life insurance business which is regulated by the Life Insurance Act 1945, insurance business is conducted under State laws.

2. **Insurance Act 1932–1937**—Companies, persons or associations of persons carrying on insurance business in Australia or in any Territory of Australia are required to deposit money or approved securities with the Commonwealth Treasurer to the extent specified in the schedule.

Money deposited is invested by the Treasurer in prescribed securities according to the selection of the depositor, and all interest accruing on deposits or securities is paid to depositors. Deposits remain as security against liability to policy holders, and are available to satisfy judgments obtained in respect of policies.

After this Act became law, State laws governing insurance deposits ceased to operate. Deposits held by States on 1st February, 1932, could, however, remain with the States subject to the conditions embodied in the laws of the States. Whilst deposits so remained with the State, the depositors, to the extent of the value of their deposits, were exempt from liability to make deposits under the Commonwealth Act, and the conditions of State laws continued to apply to the deposits until the Commonwealth Treasurer required their return to depositors who immediately had to make deposits of the prescribed amount with the Commonwealth Government.

The following are not regarded as insurance businesses under the Act :—

Staff superannuation schemes; schemes of religious organizations solely for insurance of their property; and Friendly Society, Union and Association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned, and under the Life Insurance Act 1945 ceased to apply to life insurance business.

The following statement shows particulars of deposits under the Insurance Act 1932–1937 and Life Insurance Act 1945 at 30th June, 1949 :—

DEPOSITS UNDER INSURANCE ACTS, 30th JUNE, 1949.

(£.)

Class of Insurance.	Deposited with Government of—		Total.
	Commonwealth.	States.	
Life	1,105,561	..	1,105,561
Other	1,728,416	1,459,970	3,188,386
Total	2,833,977	1,459,970	4,293,947

The deposits comprise cash £496,750, government, municipal and other securities £3,241,547, fixed deposits £4,000, bank guarantees and undertakings £237,000, titles and mortgages £314,650.

3. **Life Insurance Act 1945.**—In his speech on the introduction of the Bill for the Life Insurance Act 1945 the Treasurer stated that the objects of the legislation were as follows:—(a) To replace all State legislation on the subject of life insurance and to provide a uniform basis for applying the requirements of those Acts to the whole of Australia; (b) to incorporate existing Commonwealth Acts with minor amendments; (c) to appoint an Insurance Commissioner who shall exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy owners; (d) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

In addition, it was proposed to provide for the establishment of a Commonwealth Government Insurance Office, if and when the establishment of such an office was thought to be in the public interest.

The Act was assented to on 16th August, 1945, and came into operation on 20th June, 1946. A summary of the provisions of the Act is given in Official Year Book No. 37 (pages 595 to 597).

§ 2. Life Assurance.

1. **General.**—Statistical returns have been collected from life assurance institutions since 1907. Until 1946 these returns were collected under the Census and Statistics Act. From 1947 returns lodged under the Life Insurance Act 1945 have been used to compile life assurance statistics. This change in method of collection has resulted in some slight changes in definition and, as a result, the statistics for 1947 and 1948 are not in all cases strictly comparable with those for earlier years. In earlier years statistics of revenue and expenditure and of assets and liabilities, although generally related only to the life assurance business of the offices making the returns, also included, in some cases, a small amount of other classes of business. Under the Life Insurance Act 1945 companies transacting life assurance business were required to set up separate statutory funds for their life assurance business. As a result of this, it has been possible to separate life assurance business from other classes of business. Except where otherwise indicated, the figures in the succeeding paragraphs refer to Australian business only.

2. **Offices Transacting Business.**—The number of offices transacting life assurance business in Australia during 1948 was 23, including two overseas companies. Of the twenty-one Australian offices, six are purely mutual, including one which transacts general business in respect of which share capital is used, thirteen are public companies, and two are State Government institutions. Of the total offices, thirteen transacted both ordinary and industrial business, one industrial business only. Ordinary and industrial business has, where possible, been kept separate.

3. **Australian Business—Policies in Existence.**—(i) *Ordinary.* In the following table details of ordinary policies on the registers in each State and the Australian Capital Territory are given for the year 1948:—

ORDINARY LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE, 1948.

State or Territory.(a)	Assurance and Endowment Policies.				Annuity Policies.		
	No. of Policies.	Sum Assured.	Bonus Additions.	Annual Premiums.	No. of Policies.	Amount Per Annum.	Annual Premiums.
		£'000.	£'000.	£'000.		£	£
New South Wales ..	756,782	304,734	34,228	10,602	4,276	483,500	110,000
Victoria ..	580,559	240,528	27,931	8,680	5,864	1,800,049	432,284
Queensland(b) ..	351,770	133,450	12,863	4,354	598	49,782	7,284
South Australia ..	190,613	72,324	8,368	2,510	681	53,130	5,732
Western Australia ..	122,407	49,446	6,205	1,723	474	37,687	4,761
Tasmania ..	63,624	24,967	3,869	811	613	40,776	7,786
Australian Capital Territory	5,184	3,018	240	87	138	46,941	8,682
Total ..	2,070,939	834,467	92,704	28,767	12,044	2,511,865	576,529

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

The following table shows particulars of policies in existence at the end of the years 1939 and 1944 to 1948 inclusive :—

ORDINARY LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE.

At End of Year—	Assurance and Endowment Policies.				Annuity Policies.	
	No. of Policies.	Sum Assured.	Average per Policy.	Annual Premiums.	No. of Policies.	Amount per Annum.
		£'000.	£	£'000.		£
1939.. ..	1,243,378	427,291	344	(a) 13,954	3,826	384,584
1944.. ..	1,506,264	535,324	355	17,926	(b)	(b)
1945.. ..	1,586,662	578,435	365	19,583	(b)	(b)
1946.. ..	1,730,153	655,000	379	22,322	(b)	(b)
1947.. ..	1,901,639	740,496	389	25,463	11,461	2,179,160
1948.. ..	2,070,939	834,467	403	28,767	12,644	2,511,865

(a) Annual premium income.

(b) Not available.

(ii) *Industrial.* In the following table, details of industrial policies on the registers in each State and the Australian Capital Territory are given for the year 1948 :—

INDUSTRIAL LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE, 1948.

State or Territory.(a)	Assurance and Endowment Policies.				Annuity Policies.	
	No. of Policies.	Sum Assured.	Bonus Additions.	Annual Premiums.	No. of Policies.	Amount per Annum.
		£'000.	£'000.	£'000.		£
New South Wales	1,375,788	78,947	2,132	4,320	1	26
Victoria	1,182,404	67,880	2,017	3,757	1	13
Queensland(b)	409,171	24,640	644	1,329	1	36
South Australia	368,929	19,552	574	1,077	..	..
Western Australia	216,890	12,509	335	680	..	..
Tasmania	86,162	5,176	160	276	..	..
Australian Capital Territory ..	3,543	248	10	13	..	..
Total	3,642,887	209,012	5,872	11,452	3	75

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

Particulars of policies in existence at the end of the years 1939 and 1944 to 1948 are shown in the following table :—

INDUSTRIAL LIFE ASSURANCE : AUSTRALIAN BUSINESS—POLICIES IN EXISTENCE.

At End of Year—	Assurance and Endowment Policies.				Annuity Policies.	
	No. of Policies.	Sum Assured.	Average per Policy.	Annual Premiums.	No. of Policies.	Amount per Annum.
		£'000.	£	£'000.		£
1939.. ..	2,491,742	111,862	45	(a) 6,490	2	58
1944.. ..	3,157,977	152,841	48	8,982	(b)	(b)
1945.. ..	3,279,086	163,459	50	9,537	(b)	(b)
1946.. ..	3,428,669	178,284	52	10,279	(b)	(b)
1947.. ..	3,540,816	193,107	55	10,859	2	62
1948.. ..	3,642,887	209,012	57	11,452	3	75

(a) Annual premium income.

(b) Not available.

4. **New Policies issued in Australia.**—(i) *Ordinary Business.* During 1948 261,596 new policies were issued for £131,903,000. The average amount per policy was £504 as compared with an average of £389 per policy for all ordinary policies which were in existence at the end of 1947.

In the following table details are given of new policies issued in each State and the Australian Capital Territory during 1948.

ORDINARY LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA, 1948.

State or Territory. (a)	Assurance and Endowment Policies.				Annuity Policies.			
	No. of Policies.	Sum Assured.	Premiums.		No. of Policies.	Amount per Annum.	Premiums.	
			Single.	Annual.			Single.	Annual.
		£'000.	£'000.	£'000.		£'000.	£'000.	£'000.
New South Wales ..	99,282	47,956	115	1,743	540	79	94	23
Victoria ..	73,851	40,586	65	1,484	1,061	439	187	134
Queensland (b) ..	43,531	20,580	24	607	91	7	10	2
South Australia ..	21,024	10,778	26	397	44	4	16	1
Western Australia ..	16,427	7,730	28	289	58	6	22	1
Tasmania ..	6,861	3,709	7	124	77	5	14	2
Aust. Capital Territory..	620	564	95	15	128	27	..	8
Total ..	261,596	131,903	360	4,749	1,999	567	352	171

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

New policies issued in Australia during each of the years 1939 and 1944 to 1948 were as follows :—

ORDINARY LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA.

Year.	Assurance and Endowment Policies.				Annuity Policies.			
	No. of Policies.	Sum Assured.	Premiums.		No. of Policies.	Amount per Annum.	Premiums.	
			Single.	Annual.			Single.	Annual.
		£'000.	£'000.	£'000.		£'000.	£'000.	£'000.
1939 ..	142,157	48,263	(a)	(a)	420	87	(a)	(a)
1944 ..	122,937	52,753	(a)	2,088	(a)	(a)	(a)	(a)
1945 ..	138,113	63,973	(a)	2,447	(a)	(a)	(a)	(a)
1946 ..	214,921	104,351	(a)	3,766	(a)	(a)	(a)	(a)
1947 ..	250,022	119,169	304	4,356	3,376	651	452	207
1948 ..	261,596	131,903	360	4,749	1,999	567	352	171

(a) Not available.

(ii) *Industrial Business.* New policies to the number of 312,402 were issued during the year 1948 for a total of £29,655,000. The average amount per policy was £95, as compared with the average of £55 for all industrial policies current at the end of 1947.

Details of new industrial policies issued in each State and the Australian Capital Territory during 1948 are given in the following table.

INDUSTRIAL LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA, 1948.

State or Territory.(a)	Assurance and Endowment Policies.			
	No. of Policies.	Sum Assured.	Premiums.	
			Single.	Annual.
		£'000.	£'000.	£'000.
New South Wales	115,336	11,076	5	507
Victoria	96,441	9,067	4	417
Queensland(b)	42,630	4,203	2	190
South Australia	30,072	2,500	1	117
Western Australia	19,340	1,989	1	90
Tasmania	8,325	793	..	35
Australian Capital Territory ..	258	27	..	1
Total	312,402	29,655	13	1,357

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

Details of new industrial policies issued in Australia during the years 1939 and 1944 to 1948 are given in the following table:—

INDUSTRIAL LIFE ASSURANCE : NEW POLICIES ISSUED IN AUSTRALIA.

Year.	Assurance and Endowment Policies.			
	No. of Policies.	Sum Assured.	Premiums.	
			Single.	Annual.
		£'000.	£'000.	£'000.
1939	385,498	18,542	(a)	(a)
1944	285,628	18,045	(a)	1,038
1945	290,622	19,648	(a)	1,102
1946	358,695	26,620	(a)	1,447
1947	315,948	27,228	6	1,293
1948	312,402	29,655	13	1,357

(a) Not available.

5. Policies Matured or Otherwise Discontinued in Australia.—(i) *Ordinary Business.* The volume of business which from various causes becomes void in each year is always large. In the following table details are given of ordinary life assurance policies matured or otherwise discontinued in each State and the Australian Capital Territory during the year 1948.

ORDINARY LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA, 1948.

State or Territory.(a)	Assurance and Endowment Policies.			Annuity Policies.		
	No. of Policies.	Sum Assured.	Annual Premiums.	No. of Policies.	Amount per Annum.	Annual Premiums.
		£'000.	£'000.		£'000.	£'000.
New South Wales	37,238	15,004	577	292	15	2
Victoria	23,547	10,552	408	420	209	219
Queensland (b)	15,695	5,978	219	43	4	1
South Australia	6,888	2,854	109	15	2	..
Western Australia	5,555	2,293	88	19	..	1
Tasmania	3,378	1,200	46	5	2	..
Australian Capital Territory	—5	—9	—2	22	2	..
Total	92,296	37,932	1,445	816	234	223

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

NOTE.—Minus sign (—) indicates excess of transfers to Australian registers or other adjustments to number or value of policies.

Ordinary life assurance policies matured or otherwise discontinued during each of the years 1939 and 1944 to 1948 were as follows :—

ORDINARY LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA.

				Assurance and Endowment Policies.			Annuity Policies.		
Year.				No. of Policies.	Sum Assured.	Annual Premiums.	No. of Policies.	Amount per Annum.	Annual Premiums.
					£'000.	£'000.		£'000.	£'000.
1939	..	..	..	80,192	24,786	(a)	275	17	(a)
1944	..	..	..	49,437	16,669	(a)	(a)	(a)	(a)
1945	..	..	..	57,727	20,873	(a)	(a)	(a)	(a)
1946	..	..	..	70,804	27,714	(a)	(a)	(a)	(a)
1947	..	..	..	85,478	33,070	1,294	716	169	21
1948	..	..	..	92,296	37,932	1,445	816	234	223

(a) Not available.

The number and amount of policies, excluding annuities, discontinued in the three years 1939, 1947 and 1948 and the reasons for discontinuance are given in the following table :—

ORDINARY LIFE ASSURANCE : POLICIES^(a) MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA.

		1939.		1947.		1948.	
Cause of Discontinuance.		No. of Policies.	Sum Assured.	No. of Policies.	Sum Assured.	No. of Policies.	Sum Assured.
			£'000.		£'000.		£'000.
Death or maturity	..	22,529	5,612	28,717	8,117	30,468	8,512
Surrender	..	18,409	5,863	28,469	12,180	30,690	14,290
Forfeiture	..	39,382	13,414	29,844	11,191	33,306	13,762
Other	..	—128	—103	—1,552	1,582	—2,168	1,368
Total		80,192	24,786	85,478	33,070	92,296	37,932

(a) Excludes annuities.

NOTE:—Minus sign (—) indicates excess of transfers to Australian registers or other adjustments to number or value of policies.

(ii) *Industrial Business.* The number of policies discontinued each year in this branch also is very large. In the following table details are given of industrial policies matured or otherwise discontinued in each State and the Australian Capital Territory during 1948 :—

INDUSTRIAL LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA, 1948.

State or Territory. (a)	Assurance and Endowment Policies.		
	No. of Policies.	Sum Assured.	Annual Premiums.
		£'000.	£'000.
New South Wales	81,578	5,400	301
Victoria	66,741	4,080	231
Queensland (b)	26,981	1,884	103
South Australia	17,811	1,059	60
Western Australia	13,366	946	51
Tasmania	4,778	370	19
Australian Capital Territory	131	11	1
Total	211,386	13,750	766

(a) Location of register of policies.

(b) Includes Territories of Papua and New Guinea.

Details of industrial life assurance policies matured or otherwise discontinued during each of the years 1939 and 1944 to 1948 were as follows :—

INDUSTRIAL LIFE ASSURANCE : POLICIES MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA.

Year.	Assurance and Endowment Policies.		
	No. of Policies.	Sum Assured.	Annual Premiums.
		£'000.	£'000.
1939	262,096	12,132	(a)
1944	153,538	7,753	(a)
1945	170,837	9,056	(a)
1946	208,564	11,777	(a)
1947	204,626	12,406	720
1948	211,386	13,750	766

(a) Not available.

The number and amount of policies, excluding annuities, discontinued during the three years 1939, 1947 and 1948 and the reasons for discontinuance are given in the following table.

INDUSTRIAL LIFE ASSURANCE : POLICIES (a) MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA.

Cause of Discontinuance.	1939.		1947.		1948.	
	No. of Policies.	Sum Assured.	No. of Policies.	Sum Assured.	No. of Policies.	Sum Assured.
		£'000.		£'000.		£'000.
Death or maturity ..	73,585	2,759	100,323	4,406	107,492	4,714
Surrender	33,766	1,372	36,927	1,936	37,651	2,415
Forfeiture	154,328	7,976	67,039	6,029	66,272	6,609
Other	417	25	337	35	—29	12
Total	262,096	12,132	204,626	12,406	211,386	13,750

(a) Excludes annuities.

6. **Premiums and Claims, Australia.**—(i) *Ordinary Business.* Details of revenue from premiums in respect of the ordinary business of all offices doing business in Australia are shown in the following table for each State and the Australian Capital Territory for the year 1948:—

ORDINARY LIFE ASSURANCE : AUSTRALIAN REVENUE FROM PREMIUMS, 1948.
(£'000.)

State or Territory.(a)	Assurance and Endowment Premiums.		Consideration for Annuities.		Total.
	Single Premiums.	Other Premiums.	Single Premiums.	Other Premiums.	
New South Wales	116	10,478	94	123	10,811
Victoria	68	8,527	179	436	9,210
Queensland	26	4,203	23	4	4,256
South Australia	25	2,470	16	3	2,515
Western Australia	28	1,695	28	3	1,754
Tasmania	9	795	14	7	824
Australian Capital Territory	95	76	..	79	250
Total	367	28,244	354	655	29,620

(a) Location of register of policies.

The next table shows for the six years 1939 and 1944 to 1948 the aggregate Australian income from premiums in respect of ordinary business of all offices doing business in Australia.

ORDINARY LIFE ASSURANCE : AUSTRALIAN REVENUE FROM PREMIUMS.
(£'000.)

Year.	Assurance and Endowment Premiums.	Consideration for Annuities.	Total.
1939	13,954	184	14,138
1944	18,073	249	18,322
1945	19,964	275	20,239
1946	22,320	459	22,779
1947	25,140	970	26,110
1948	28,611	1,009	29,620

Details of the claims, etc., paid on ordinary assurance policies in each State and the Australian Capital Territory during the year 1948 are shown in the following table:—

ORDINARY LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA, 1948.
(£'000.)

State or Territory.(a)	Claims.			Annuities.	Cash Bonuses.	Total.
	By Death or Disability.	By Maturity.	Sur-renders.			
New South Wales	2,393	1,597	700	110	35	4,835
Victoria	1,864	1,782	518	90	30	4,284
Queensland	947	788	257	21	13	2,026
South Australia	563	482	112	29	7	1,193
Western Australia	361	241	119	14	9	744
Tasmania	217	162	50	15	2	446
Australian Capital Territory	4	7	10	2	..	23
Total	6,349	5,059	1,766	281	96	13,551

(a) Location of register of policies.

In the following table details are given of claims, etc., paid on ordinary policies in Australia for the six years 1939 and 1944 to 1948 :—

ORDINARY LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA.
(£'000.)

Year.	Claims.	Surrenders.	Annuities.	Cash Bonuses.	Total.
1939	7,935	1,843	220	260	10,258
1944	9,881	930	247	85	11,143
1945	11,197	1,094	234	103	12,628
1946	11,673	1,499	247	112	13,531
1947	10,858	1,608	261	105	12,832
1948	11,408	1,766	281	96	13,551

(ii) *Industrial Business.* Details of premiums on industrial policies received in each State and the Australian Capital Territory during the year 1948 are given in the following table :—

INDUSTRIAL LIFE ASSURANCE : AUSTRALIAN REVENUE FROM PREMIUMS, 1948.
(£'000.)

State or Territory.(a)	Assurance and Endowment Policies.		
	Single Premiums.	Other Premiums.	Total.
New South Wales	4	4,240	4,244
Victoria	4	3,661	3,665
Queensland	3	1,279	1,282
South Australia	1	1,051	1,052
Western Australia	1	657	658
Tasmania .. .. .	..	268	268
Australian Capital Territory .. .. .	..	13	13
Total	13	11,169	11,182

(a) Location of register of policies.

The Australian receipts from premiums on industrial policies for the years 1939 and 1944 to 1948 were as follows :—

INDUSTRIAL LIFE ASSURANCE : AUSTRALIAN REVENUE FROM PREMIUMS.
(£'000.)

Particulars.	1939.	1944.	1945.	1946.	1947.	1948.
Assurance and Endowment Premiums	6,490	8,716	9,370	9,870	10,510	11,182

Details of payments of claims, etc., on industrial policies in each State and the Australian Capital Territory during the year 1948 are given in the following table :—

**INDUSTRIAL LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS
IN AUSTRALIA, 1948.**
(£'000.)

State or Territory. (a)	Claims.		Surrenders.	Cash Bonuses.	Total.
	By Death or Disability.	By Maturity.			
New South Wales ..	308	1,790	186	I	2,285
Victoria ..	251	1,557	160	..	1,968
Queensland ..	89	484	71	..	644
South Australia ..	73	360	38	..	471
Western Australia ..	41	259	37	..	337
Tasmania ..	16	84	10	..	110
Aust. Capital Territory ..	..	8	I	..	9
Total ..	778	4,542	503	I	5,824

(a) Location of register of policies.

Claims, etc., paid on industrial policies in Australia for the six years 1939 and 1944 to 1948 were as follows :—

INDUSTRIAL LIFE ASSURANCE : PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA.
(£'000.)

Year.	Claims.	Surrenders.	Cash Bonuses.	Total.
1939	3,132	499	..	3,631
1944	4,395	153	I	4,549
1945	4,700	211	..	4,911
1946	4,834	368	..	5,202
1947	4,983	478	..	5,461
1948	5,320	503	I	5,824

7. **Total Revenue and Expenditure.**—(i) *Total Revenue.* The following table shows particulars of the total revenue derived by life assurance offices from sources within and beyond Australia during the years 1939 and 1944 to 1948 :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL REVENUE.
(£'000.)

Year.	Assurance and Endowment Premiums.	Con-sideration for Annuities Granted.	Interest, Dividends and Rents.	All other Revenue.	Total Revenue.
ORDINARY BUSINESS.					
1939	21,568	303	9,901	17	31,789
1944	27,273	302	11,900	31	39,506
1945	29,879	384	12,236	19	42,518
1946	33,197	642	12,801	42	46,682
1947	37,103	1,179	13,600	305	52,187
1948	41,614	1,232	14,371	68	57,285

ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL REVENUE
—continued.
(£'000.)

Year.	Assurance and Endowment Premiums.	Con-sideration for Annuities Granted.	Interest, Dividends and Rents.	All other Revenue.	Total Revenue.
INDUSTRIAL BUSINESS.					
1939	7,863	..	2,127	61	10,051
1944	10,320	..	2,633	61	13,014
1945	11,050	..	2,756	19	13,825
1946	11,616	..	2,851	7	14,474
1947	12,359	..	3,021	80	15,460
1948	13,075	..	3,170	10	16,255

(ii) *Total Expenditure.* The next table supplies details of the total expenditure both within and beyond Australia, of life assurance offices during the years 1939 and 1944 to 1948:—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL EXPENDITURE.
(£'000.)

Year.	Claims and Annuities Paid.	Surrenders.	Cash Bonuses Paid to Policy-holders.	Com-mission.	Share-holders' Dividends.	All Other Expendi-ture.(a)	Total Expendi-ture.
ORDINARY BUSINESS.							
1939 ..	12,320	2,668	380	1,483	125	3,867	20,843
1944 ..	15,868	1,351	125	1,646	84	3,690	22,764
1945 ..	17,493	1,553	147	1,890	86	3,435	24,604
1946 ..	17,929	2,105	176	2,655	89	4,081	27,035
1947 ..	17,318	2,234	143	3,250	94	5,066	28,105
1948 ..	18,674	2,545	138	3,471	97	5,094	30,019
INDUSTRIAL BUSINESS.							
1939 ..	3,763	576	..	1,619	72	1,278	7,308
1944 ..	5,318	189	I	1,746	45	1,425	8,724
1945 ..	5,695	254	..	1,837	46	1,561	9,393
1946 ..	5,860	419	..	2,010	49	1,654	9,992
1947 ..	6,052	543	..	2,075	46	1,763	10,479
1948 ..	6,409	587	I	2,058	41	1,859	10,955

(a) Includes other expenses of management, licence fees and taxes, etc.

8. *Liabilities and Assets.*—(i) *General.* The liabilities of the Australian offices consist mainly of their assurance funds, but in the case of public companies there is a further liability on account of the shareholders' capital. The assets consist chiefly of government and municipal securities, mortgages, loans on policies, landed and house property, etc. Loans on personal security are granted by very few of the Australian offices. A number of the larger Australian offices have extensive business overseas and separate details of liabilities and assets in respect of Australian business are not available for years after 1941. For 1941 and earlier years see Official Year Book No. 37 and previous issues.

(ii) *Total Liabilities and Assets.* In the two tables which follow the details of liabilities and assets relate to all business (Australian and overseas) of Australian companies, the life assurance business of the two State Government offices, all business of the Provident Life Assurance Co. Ltd. (incorporated in New Zealand) and the Australian business only of the Prudential Assurance Co. Ltd. (incorporated in England). For various reasons several offices do not attempt the dissection of liabilities and assets between the industrial and ordinary branches, and, therefore, the figures in the following tables relate to the ordinary and industrial branches combined. Details of the total liabilities of life assurance offices for the year 1948 are given in the following table:—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE: TOTAL LIABILITIES, 1948.
(£'000.)

Item.	Life Assurance Business.	Other Classes of Business.	Total Liabilities.
Shareholders' Capital—			
Authorized .. .. .	..	4,723	4,723
Less Unissued .. .. .	..	1,979	1,979
Subscribed Capital .. .. .	..	2,744	2,744
Paid-up—			
In Money .. .. .	..	2,252	2,252
Otherwise than in Money .. .. .	..	112	112
Total .. .. .	..	2,364	2,364
Life Assurance Statutory Funds—			
Ordinary Department	380,953	..	380,953
Industrial Department	85,033	..	85,033
Total	465,986	..	465,986
Funds in respect of Other Classes of Business .. .. .	..	560	560
General Reserves	10,487	923	11,410
Profit and Loss Account Balance .. .. .	..	50	50
Total, Shareholders' Capital, Assurance Funds and Reserves	476,473	3,897	480,370
Other Liabilities—			
Deposits	465	789	1,254
Staff Provident and Superannuation Funds	177	609	786
Claims admitted or intimated but not paid	6,149	38	6,187
Annuities due but not paid	7	..	7
Premiums Paid in Advance and in Suspense	569	8	577
Sundry Creditors	1,446	73	1,519
Bank Overdraft	163	2	165
Reserves and Provisions for Taxation	1,790	133	1,923
Other Liabilities	541	10	551
Total Liabilities	487,780	5,559	493,339

The following table furnishes details of the total assets of life assurance offices for the year 1948 :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE : TOTAL ASSETS, 1948.
(£'000.)

Item.	Life Assurance Business.	Other Classes of Business.	Total.	Amount of Total Assets held in Australia.
Fixed Assets—				
Office Premises	10,594	214	10,808	8,049
Other Freehold and Leasehold Property ..	6,899	105	7,004	4,894
Office Furniture, Fittings and Equipment and Motor Vehicles	233	20	253	181
Total Fixed Assets	17,726	339	18,065	13,124
Loans—				
On Mortgage	66,292	50	66,342	51,954
On Debentures and Shares	46	2	48	48
On Policies of the company including Advances of Premiums	21,963	..	21,963	16,141
On Life Interests and Reversions	199	..	199	192
On Personal Security	56	5	61	60
Other Loans	3,714	99	3,813	3,808
Total Loans	92,270	156	92,426	72,203
Investments—				
Government Securities—				
Australia	226,729	3,318	230,047	216,340
New Zealand	30,428	142	30,570	554
Great Britain	5,571	..	5,571	..
Other British Dominions	6,013	5	6,018	10
Securities of Local and Semi-Governmental Bodies	76,962	344	77,306	54,084
Debentures	5,844	3	5,847	4,935
Preference Shares	4,130	22	4,152	3,706
Ordinary Shares	7,422	271	7,693	6,530
Holdings in Controlled Companies	1,255	275	1,530	1,370
Life Interests and Reversions purchased ..	37	1	38	37
Other Investments	914	..	914	635
Total Investments	365,305	4,381	369,686	288,201
Cash on Deposit, Current Account and in hand	4,479	68	4,547	3,295
Other Assets—				
Outstanding Premiums	2,109	7	2,116	1,542
Interests, Dividends and Rents accrued and outstanding	3,951	37	3,988	3,025
Sundry Debtors	300	28	328	196
Establishment Account (a)	152	542	694	674
Other Assets	1,488	1	1,489	867
Total Assets	487,780	5,559	493,339	383,127

(a) Includes goodwill and other intangible assets.

(iii) *Australian Assets.* Details of Australian assets for the years 1939 and 1944 to 1948 are set out in detail in the following table :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE(a) : AUSTRALIAN ASSETS.
(£'000.)

Particulars.	1939.	1944.	1945.	1946.	1947. (b)	1948. (b)
Landed and house property..	12,823	(c)	(c)	(c)	12,845	12,943
Government and municipal securities	115,712	194,539	217,921	238,335	256,777	270,988
Life interests and reversions..	234	(c)	(c)	(c)	75	37
Other investments	6,466	(c)	(c)	(c)	11,747	17,176
Loans on mortgages	61,720	57,216	51,065	48,349	47,977	51,954
Loans on companies' policies	22,445	17,514	16,471	15,965	15,843	16,141
Other loans	(d)	(c)	(c)	(c)	3,598	4,108
Outstanding premiums ..	1,087	(c)	(c)	(c)	1,401	1,542
Outstanding interest, dividends and rents ..	1,811	(c)	(c)	(c)	2,863	3,025
Cash	2,399	(c)	(c)	(c)	2,882	3,295
Establishment and organization accounts(e) ..	1,101	1,141	1,127	975	942	674
All other assets	1,718	26,374	28,966	29,841	1,065	1,244
Total Australian Assets	227,516	296,784	315,550	333,465	357,115	383,127

(a) Life assurance and other classes of business, available separately; included with other assets.
(e) Includes goodwill and other intangible assets.

(b) Assets held in Australia. (c) Not
(d) Included with other investments.

§ 3. Fire, Marine and General Insurance.

1. *Australasian Companies.*—The statistical information in this paragraph has been extracted from the *Australasian Insurance and Banking Record*. The following table shows, for the years 1938-39 and 1943-44 to 1947-48, particulars of the revenue and expenditure of a group of insurance companies having their head offices either in Australia, New Zealand or Fiji.

FIRE, MARINE AND GENERAL INSURANCE COMPANIES : SUMMARY OF REVENUE AND EXPENDITURE.

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
No. of companies	40	42	42	43	43	43
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Premiums, less reinsurances	9,708	12,576	12,337	13,246	15,472	19,363
Losses	5,417	6,283	6,153	7,031	8,056	10,437
Expenses, commission and taxes	2,994	4,500	4,526	4,633	4,928	5,720
Trade surplus	1,297	1,793	1,658	1,582	2,488	3,206
Interest, rent, etc.	1,011	914	996	1,108	1,141	1,181
Total surplus	2,308	2,707	2,654	2,690	3,629	4,387
Dividends and bonuses paid	709	799	1,287	1,036	1,102	1,248

2. *Aggregate Australian Business.*—(i) *General.* While the foregoing statements relate only to those companies whose head offices are located in Australia, New Zealand or Fiji, the following particulars, which are somewhat restricted in the range of information, are in respect of all companies operating in Australia. The statistics in this paragraph conform substantially to the following definitions and should be interpreted in accordance therewith.

(a) Premiums represent the full amount receivable in respect of policies issued and renewed in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from "earned premium income" appropriate to the year. When business is increasing, as in recent years, premiums receivable (as shown in the statistics) are greater than "earned premium income" appropriate to the year. The converse applies when business is declining.

(b) Claims or losses include provision for outstanding claims and represent claims or losses incurred in the year. Salvage and other amounts recoverable have been deducted.

(c) Contributions to Fire Brigades, Commission and Agents' Charges, and Expenses of Management represent mainly charges paid during the year.

(d) Taxation represents mainly payments made during the year, and includes income tax, pay-roll tax, licence fees, stamp duty (where paid by the company), etc. Income tax paid during the year is based on the income of earlier years.

The tables contain selected items of statistics and the information shown is not suitable for the construction of a "profit and loss" statement or "revenue" account.

In cases where the business is underwritten in one State and the risk is situated in another the business is included in the State in which the policy was issued.

During 1948-49 (1947-48 in brackets) revenue from premiums amounted to £38,882,000 (£31,270,000) and from the net interest on investments, etc., to £1,469,000 (£1,281,000), totalling £40,351,000 (£32,551,000). Expenditure on losses amounted to £18,898,000 (£16,353,000), contributions to Fire Brigades £820,000 (£755,000), commission and agents' charges £4,048,000 (£3,319,000), expenses of management £6,597,000 (£5,643,000) and taxation £1,601,000 (£1,471,000), a total of £31,964,000 (£27,541,000).

(ii) *States.* The following table shows, for each State, the aggregate premium income less reinsurances and returns, and claims paid less reinsurances, for all classes of insurance other than life for the years 1938-39 and 1944-45 to 1948-49.

FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES.
(£'000.)

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
CROSS PREMIUMS, LESS REINSURANCES AND RETURNS.						
New South Wales	6,943	8,272	8,736	10,434	13,356	15,935
Victoria	4,505	5,623	5,785	7,115	9,406	11,994
Queensland	2,327	2,484	2,513	2,787	3,406	4,557
South Australia	1,245	1,279	1,332	1,666	2,170	2,861
Western Australia	1,373	1,282	1,445	1,751	2,094	2,536
Tasmania	457	523	546	653	838	999
Total	16,850	19,463	20,357	24,406	31,270	38,882
GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE.						
New South Wales	3,842	3,718	3,987	5,182	7,441	8,278
Victoria	2,194	2,801	2,225	3,010	4,470	5,494
Queensland	1,071	1,180	1,291	1,807	2,032	2,367
South Australia	487	352	513	675	1,063	1,357
Western Australia	731	577	611	869	1,044	1,027
Tasmania	204	178	168	219	303	375
Total	8,529	8,806	8,795	11,762	16,353	18,898

NOTE.—See footnotes to table on page 753.

(iii) *Classes of Insurance.* The following statement shows premiums and losses in respect of the principal classes of risks, for the years 1938-39 and 1944-45 to 1948-49 :—

**FIRE, MARINE AND GENERAL INSURANCE : PREMIUMS AND LOSSES—
PRINCIPAL CLASSES OF RISK.**

(£'000.)

Class of Risk.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
GROSS PREMIUMS, LESS REINSURANCES AND RETURNS.						
Fire	5,597	6,756	7,008	7,775	9,074	10,743
Workers' Compensation(a) ..	4,361	5,158	5,203	6,283	8,060	10,066
Motor Vehicle—						
Compulsory Third Party ..	3,848	1,005	1,075	1,143	1,436	1,832
Other		1,866	2,090	2,865	4,234	6,252
Marine(b)	1,018	1,811	1,637	2,367	3,026	3,635
Personal Accident	554	(c)	(c)	(c)	(c)	1,012
All Other	1,472	2,867	3,344	3,973	5,440	5,342
Total	16,850	19,463	20,357	24,406	31,270	38,882

GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE.

Fire	2,223	2,385	1,730	2,101	2,414	2,951
Workers' Compensation(a) ..	2,972	3,400	3,695	4,799	5,751	5,920
Motor Vehicle—						
Compulsory Third Party ..	2,324	450	693	1,060	1,493	2,014
Other		887	1,196	1,954	2,619	3,528
Marine(b)	243	804	407	638	1,145	1,248
Personal Accident	264	(c)	(c)	(c)	(c)	349
All Other	503	880	1,074	1,210	2,931	2,888
Total	8,529	8,806	8,795	11,762	16,353	18,898

(a) From 1944-45 excludes Workmen's Compensation Insurance in coal-mining industry in New South Wales. (b) Excludes business of Commonwealth Marine War Risks Insurance Board. (c) Included with All Other.

The volume of business measured by the amount of premium income shows that fire insurance represented about 29.0 per cent. of the total business during 1947-48 and 27.6 per cent. during 1948-49, while next in importance were workers' compensation 25.8 per cent. during 1947-48 and 25.9 per cent. during 1948-49, and motor vehicles (including compulsory third party insurance) 18.1 per cent. in 1947-48 and 20.8 per cent. in 1948-49. Marine insurance constituted 9.7 per cent. in 1947-48 and 9.3 per cent. in 1948-49.

3. *Commonwealth Marine War Risks Insurance Board.*—The statistics given in the two preceding paragraphs exclude the transactions of the Commonwealth Marine War Risks Insurance Board. For information relating to the operations of the Board see Official Year Book No. 37, page 604. Transactions of the Board for the years 1940-41 to 1948-49 are shown in the following table.

COMMONWEALTH MARINE WAR RISKS INSURANCE BOARD : SUMMARY OF TRANSACTIONS.

(£.)

Year.	Expenditure.			
	Net Premiums Received.	Claims Paid.	Other Expenses.	Total.
1940-41	154,853	..	15	15
1941-42	443,820	80,103	632	80,735
1942-43	2,086,824	1,333,687	48,654	1,382,341
1943-44	2,685,780	855,172	48,670	903,842
1944-45	1,634,770	281,385	23,684	305,069
1945-46	428,393	30,321	6,901	37,222
1946-47	92,984	50,232	2,757	52,989
1947-48	15	88,375	575	88,950
1948-49	75	5,207	255	5,462

E. FRIENDLY SOCIETIES.

1. **General.**—Friendly societies are an important factor in the social life of the community, as probably more than one-third of the total population of Australia comes either directly or indirectly under their influence. Their total membership is over 630,000, but, as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must, even when due allowance is made for young and unmarried members, be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules conform to the law, and that the scale of contribution is sufficient to provide the promised benefits. Societies are obliged to forward to the Registrar annual returns as to their membership and their finances, and reports are published in most of the States dealing with the returns received.

2. **Number of Societies, Lodges and Members.**—The number of different societies and lodges, the total number of benefit members at the end of the year 1947-48 and their average number during the year are shown in the following table :—

FRIENDLY SOCIETIES : SOCIETIES, LODGES AND MEMBERS, 1947-48.

State.	Registered Friendly Societies.	Branches.	Benefit Members at End of Year.	Average Benefit Members during the Year.
New South Wales (a)	32	2,313	228,961	230,403
Victoria (b)	112	1,403	205,433	205,694
Queensland	25	558	70,459	71,175
South Australia (c)	17	(d) 867	78,246	79,937
Western Australia (c)	13	324	30,527	30,912
Tasmania (e)	20	174	22,657	(f) 22,924
Total .. .. .	..	5,699	636,283	640,145

(a) Includes branches in the Australian Capital Territory ; excludes twenty-two miscellaneous societies consisting of Medical Institutes, Dispensaries and Burial Societies. (b) Excludes Dispensaries, Juvenile branches and members contributing to medical benefits only. (c) Excludes Juvenile branches. (d) Societies containing male and female branches counted as two branches. (e) Year 1948. (f) Estimated.

3. **Sickness and Death Returns.**—Sick pay is generally granted for a number of months at full rates, then for a period at half rates, and in some societies is finally reduced to quarter rates. The following table shows the total number of members who received sick pay during the year, the number of weeks in the aggregate for which they received pay, and the average per member sick, and, further, the number of benefit members who died during the year, together with the proportion of deaths per thousand average members :—

FRIENDLY SOCIETIES : SICKNESS AND DEATH RETURNS, 1947-48.

State.	Members who received Sick Pay.	Total Weeks Sick Pay Granted.	Average Weeks per Member Sick.	Benefit Members (a)	
				Deaths.	Proportion of deaths per 1,000 (Average).
New South Wales ..	(b)	(b)	(b)	2,776	12.05
Victoria ..	47,723	503,159	10.54	2,342	11.39
Queensland ..	14,409	150,946	10.48	913	12.83
South Australia ..	18,217	200,084	10.98	1,047	13.25
Western Australia ..	7,110	70,068	9.85	264	8.54
Tasmania (c) ..	3,965	42,256	10.66	350	15.27
Total ..	(b)	(b)	(b)	7,692	12.02

(a) Excludes registered wives.

(b) Not available.

(c) Year 1948.

4. **Revenue and Expenditure.**—(i) *Revenue.* The financial returns are not prepared in the same way in each State, but an attempt has been made in the following table to group the revenue under the main headings :—

FRIENDLY SOCIETIES : REVENUE, 1947-48.

(£.)

State.	Entrance Fees, Members' Contributions and Levies.	Interest, Dividends and Rents.	All other Revenue.	Total Revenue.
New South Wales ..	1,007,252	219,491	41,923	1,268,666
Victoria ..	898,689	289,060	83,332	1,271,081
Queensland ..	273,351	90,724	(a)	364,075
South Australia ..	290,084	144,847	31,087	466,018
Western Australia ..	150,201	31,100	20,549	201,850
Tasmania (b) ..	88,388	21,540	19,763	129,691
Total ..	2,707,965	796,762	196,654	3,701,381

(a) Included in Interest, Dividends and Rents.

(b) Year 1948.

(ii) *Expenditure.* The returns relating to expenditure are in greater detail than those for revenue and particulars of the major items are shown below.

FRIENDLY SOCIETIES : EXPENDITURE, 1947-48.

(£.)

State.	Sick Pay.	Medical Attendance and Medicine.	Sums Payable at Death of Members and Members' Wives.	Adminis-tration.	All other Expendi-ture.	Total Expendi-ture.
New South Wales ..	311,485	418,721	112,228	210,274	48,957	1,101,665
Victoria ..	300,153	409,120	63,063	196,585	155,838	1,124,759
Queensland ..	91,421	120,633	44,209	57,309	(a)	313,572
South Australia ..	104,223	120,335	51,605	56,534	64,117	390,815
Western Australia ..	39,289	68,619	15,372	31,372	4,572	159,224
Tasmania (b) ..	25,894	36,577	25,117	21,817	12,038	121,443
Total ..	872,465	1,174,006	311,594	573,891	285,522	3,217,478

(a) Included in administration.

(b) Year 1948.

5. Funds.—The funds of friendly societies in each State at the end of the year 1947-48 were:—New South Wales, £6,337,000; Victoria, £7,870,000; Queensland, £2,471,000; South Australia, £3,716,000; Western Australia, £901,000; Tasmania, £607,000; total, £21,902,000.

F. PROBATES AND LETTERS OF ADMINISTRATION.

The following particulars give some idea of the number and value of estates of deceased persons in each State for the latest year for which information is available. Owing to differences in legislation in the various States the figures are not entirely comparable.

PROBATES AND LETTERS OF ADMINISTRATION.

Particulars.		New South Wales. 1947-48. (a)	Victoria. 1948.	Queens- land. 1947-48.	South Australia. 1948.	Western Australia. 1948.	Tasmania 1948. (b)
Probates—							
Estates ..	No.	14,912	9,208	1,644	2,370	1,828	826
Gross value ..	£	(c)	(d)	10,260,151	9,770,750	5,703,254	2,898,067
Net Value ..	£	40,895,855	(d)	(c)	9,054,120	5,201,335	2,654,237
Letters of Administration—							
Estates ..	No.	(d)	2,464	272	836	380	170
Gross value ..	£	(d)	(d)	464,899	842,526	455,270	211,613
Net Value ..	£	(d)	(d)	(c)	686,877	377,213	180,908
Total—							
Estates ..	No.	14,912	11,672	1,916	3,206	2,208	996
Gross value ..	£	(c)	36,614,856	10,725,350	10,619,276	6,158,524	3,109,680
Net Value ..	£	40,895,855	34,158,673	(c)	9,740,997	5,578,548	2,835,145

(a) Total estates of deceased persons assessed for death duty. (b) Estates dealt with by Taxation Department.
(c) Not available. (d) Not available separately.

CHAPTER XVII.

PUBLIC FINANCE.

NOTE.—The subject of “Public Finance” is dealt with in this Chapter under the two major divisions of Commonwealth Finance and State Finance. The close financial relations between the Commonwealth and States, however, particularly since the Financial Agreement has been in operation, demand a combination of these two divisions under the heading of Commonwealth and State Finance. Under the Financial Agreement the Commonwealth assumed the liability to bondholders for the States’ Debts existing at the date of the agreement and now arranges for all borrowings for and on behalf of the Commonwealth or any State and for all conversions, renewals, redemptions and consolidations of the Public Debts of the Commonwealth and the States. In earlier issues of the Official Year Book information relating to the Public Debt of the Commonwealth and the States was given in each of the divisions referred to above. In this issue, however, it is dealt with in a separate division which incorporates the sections previously included in the other divisions.

In view of their importance a separate division relating to taxes on income is included.

A. COMMONWEALTH FINANCE.

§ 1. General.

1. Financial Provisions of the Constitution.—The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Sections 81 to 105A of the Commonwealth Constitution (*see* pages 20–23 of this issue). Two other sections which have a most important bearing on questions of Commonwealth finance are Sections 69 and 51.

Section 69 provides for the transfer to the Commonwealth from the States of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in previous issues of the Official Year Book and on pages 785–8 of this issue a *résumé* is given of the constitutional obligations upon the Commonwealth regarding payments to the States.

The majority of the tables relating to Commonwealth Finance have been compiled from the annual Budget Papers as presented to Parliament by the Treasurer of the Commonwealth.

2. Accounts of Commonwealth Government.—The Commonwealth Government, like the State Governments, bases its accounts upon three funds, the Consolidated Revenue Fund, the Trust Fund and the Loan Fund, the last-mentioned fund coming into existence in the financial year 1911–12.

§ 2. Consolidated Revenue Fund.

Division I.—Nature of Fund.

1. Provisions of the Constitution.—The provisions made for the formation of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on the fund, are contained in Sections 81 to 83 of the Constitution (*see* page 20 of this issue).

2. Annual Results of Transactions.—The following statement shows, for the period 1929-30 to 1948-49, the receipts, expenditure and excess receipts or deficiency for each year, together with the accumulated result and the payments made from the excess receipts.

The receipts and expenditure on account of the balance of interest on States' Debts payable by the States to the Commonwealth under the Financial Agreement have been excluded.

COMMONWEALTH CONSOLIDATED REVENUE : RECEIPTS, EXPENDITURE, ETC.
(£.)

Year.	Receipts.	Expenditure.	Ordinary Transactions.		Payments from Excess Receipts.	Accumulated Result.	
			Excess Receipts.	Deficiency.		Excess Receipts.	Deficiency. (a)
1929-30 ..	77,143,389	78,614,392	..	1,471,003	..	..	6,458,721
1930-31 ..	69,566,920	80,324,539	..	10,757,619	..	..	17,216,340
1931-32 ..	71,532,298	70,218,207	1,314,091	..	..	1,314,091	17,216,340
1932-33 ..	73,512,809	69,966,201	3,546,608	..	..	4,860,699	17,216,340
1933-34 ..	73,941,953	72,640,383	1,301,570	..	..	6,162,269	17,216,340
1934-35 ..	77,369,105	76,657,900	711,205	..	6,160,000	713,474	17,216,340
1935-36 ..	82,203,341	78,635,621	3,567,720	..	713,474	3,567,720	17,002,866
1936-37 ..	82,807,977	81,531,419	1,276,558	..	3,567,720	1,276,558	15,935,146
1937-38 ..	89,458,154	85,963,421	3,494,733	..	1,276,558	3,494,733	15,658,588
1938-39 ..	95,064,790	94,437,481	627,309	..	3,494,733	627,309	(b)
1939-40 ..	111,913,784	108,985,409	2,928,375	..	627,309	2,928,375	..
1940-41 ..	150,482,306	150,482,306	..	..	2,928,375	..	..
1941-42 ..	210,040,969	210,040,969	..	..	..	..	..
1942-43 ..	294,459,156	294,459,156	..	..	..	..	..
1943-44 ..	342,188,160	342,188,160	..	..	..	..	..
1944-45 ..	376,854,101	376,854,101	..	..	..	..	..
1945-46 ..	390,780,401	390,780,401	..	..	..	..	..
1946-47 ..	431,256,307	431,256,307	..	..	..	..	..
1947-48 ..	465,905,122	464,484,602	1,420,430	..	..	1,420,430	..
1948-49 ..	554,377,372	554,377,372	..	..	1,420,430	..	..

(a) Met by temporary advance from loan fund.

(b) Deficiency funded from Loan Fund.

3. Payments from Excess Receipts.—Particulars of the excess receipts, accumulated balances and allocation of excess receipts since 1938-39 are shown in the following table :—

COMMONWEALTH CONSOLIDATED REVENUE : EXCESS RECEIPTS.
(£.)

Particulars.	1938-39.	1939-40.	1940-41.	1947-48.	1948-49.
Accumulated balance ..	3,494,733	627,309	2,928,375	..	1,420,430
Excess receipts ..	627,309	2,928,375	..	1,420,430	..
Total for year ..	4,122,042	3,555,684	2,928,375	1,420,430	1,420,430
Expenditure from excess receipts—					
Defence equipment ..	3,494,733	627,309	2,928,375	..	..
Reserve for payment of War Gratuity ..	..	..	..	..	1,420,430
Total ..	3,494,733	627,309	2,928,375	..	1,420,430
Accumulated balance ..	627,309	2,928,375	..	1,420,430	..

The Consolidated Revenue Fund for the financial years 1940-41 to 1946-47 and 1948-49 was exactly balanced, as all available revenue after charging expenditure on ordinary services was used for war and repatriation purposes.

Division II.—Revenue.

1. **General.**—The following table furnishes details of the revenue from each source and the amount per head of population under each of the main headings during the years 1938-39 and 1944-45 to 1948-49 :—

COMMONWEALTH CONSOLIDATED REVENUE : SOURCES.

(£.)

Source.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Taxation	74,111,295	337,994,759	353,211,206	385,615,799	422,413,232	490,813,055
Percentage of Total .. %	78.0	89.7	90.4	89.4	90.7	88.5
Per head of population (a) ..	£10 13 9	£45 19 11	£47 10 11	£51 5 9	£55 5 9	£62 18 8
Business Undertakings	17,892,221	30,737,646	30,119,738	30,956,807	32,579,814	34,912,297
Percentage of Total .. %	18.8	8.1	7.7	7.2	7.0	6.3
Per head of population (a) ..	£2 11 9	£4 3 8	£4 1 1	£4 2 4	£4 5 3	£4 9 6
Territories (b)	355,401	455,169	508,565	570,600	665,642	738,499
Percentage of Total .. %	0.4	0.1	0.1	0.1	0.1	0.1
Per head of population (a) ..	£0 1 0	£0 1 3	£0 1 4	£0 1 6	£0 1 9	£0 1 11
Other Revenue—						
Interest, etc.	1,144,014	1,202,118	1,141,601	1,091,976	1,295,580	1,532,371
Coinage	127,764	1,307,037	604,599	..	496,725	635,095
Defence	151,208	(c) 126,318	(c) 250,184	(c) 238,675	(c) 216,260	(c) 351,968
Civil Aviation	5,745	1,172,958	1,166,551	961,295	1,595,106	1,997,614
Health	18,204	11,889	13,696	15,747	14,141	19,711
Patents, Trade Marks, etc. ..	67,914	76,997	95,122	111,621	124,418	127,526
Bankruptcy	30,770	16,077	14,526	14,975	16,550	20,216
Wool Committee Operations						
Surplus .. .. .	..	..	..	7,075,000	125,000	102,661
Commerce and Agriculture ..	} 158,137	{ 12,769	11,178	23,528	-22,113	235,095
Shipping and Fuel						
Net Profit on Australian Note Issue	766,730	2,948,472	2,939,405	3,792,384	4,086,702	4,459,903
Surplus Balances of Trust Accounts .. .. .	..	102,373	..	..	..	17,000,000
Other	235,387	428,451	453,039	640,284	42,122,434	(d) 953,114
Total	2,705,873	7,666,527	6,940,892	14,113,101	10,246,434	27,913,521
Percentage of Total .. %	2.8	2.1	1.8	3.3	2.2	5.0
Per head of population (a) ..	£0 7 9	£1 0 10	£0 18 8	£1 17 7	£1 6 10	£3 11 7
Grand Total	95,064,790	376,854,101	390,780,401	431,256,307	465,905,122	554,377,372
Per head of population (a) ..	£13 14 3	£51 5 8	£52 12 0	£57 7 2	£60 19 7	£71 1 8

(a) Based on mean population of each financial year.
receipts have been credited as an offset to war expenditure.
surplus funds, 1947-48, £650,000; and 1948-49, £110,059.

(b) Excludes Railways.
(c) Further
(d) Includes Eggs—War-time control

NOTE.—Minus sign (—) indicates an excess of refunds.

2. **Taxation.**—(i) *Total Collections.* (a) *Amount.* Collections under each heading for the years 1938-39 and 1944-45 to 1948-49 are shown below :—

COMMONWEALTH TAXATION : TOTAL COLLECTIONS.

(£.)

Heading.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Customs	31,160,462	21,487,538	28,893,682	45,871,085	57,597,154	63,464,434
Excise	16,471,903	45,689,133	49,066,962	56,375,304	58,007,486	62,734,781
Sales Tax	9,308,334	29,671,802	33,600,175	36,264,585	34,728,579	39,029,276
Flour Tax (b) ..	1,808,972	1,995,775	1,779,238	1,747,383	985,327	1,319
Land Tax	1,489,436	3,664,420	3,782,359	3,679,481	3,640,900	3,032,316
Income Taxes (a) ..	11,882,440	215,534,037	194,593,578	156,764,940	161,452,207	182,091,811
Social Services Contribution ..	..	..	20,000,000	51,000,000	71,447,848	90,255,065
Pay-roll Tax .. ..	..	11,088,088	11,499,243	13,646,736	16,594,764	19,802,924
Gold Tax .. ..	..	342,457	383,552	556,435	10,713	— 4,605
Estate Duty	1,915,352	3,090,200	3,880,041	4,018,620	4,555,004	4,740,362
Gift Duty .. ..	..	329,296	392,499	544,673	780,401	581,463
Entertainments Tax ..	..	5,026,821	5,069,672	5,137,805	5,198,337	5,298,677
Wool Levy (b)	74,396	75,192	269,755	11,628	458	..
Wool Contributory Charge (b) ..	..	..	..	4,497,124	1,423,874	1,028,882
Wheat Tax and Export Charge (b) ..	..	..	..	5,500,000	5,729,780	18,086,150
Stevedoring Industry Charge (b) ..	..	..	..	..	260,400	670,200
Total Taxation	74,111,295	337,994,759	353,211,206	385,615,799	422,413,232	490,813,055
Percentage of Total Revenue ..	78.0	89.7	90.4	89.4	90.7	88.5

(a) Includes War-time (Company) Tax, Super Tax and Undistributed Profits Tax. (b) Paid to Trust Fund for purposes of industry concerned.

NOTE.—Minus sign (—) indicates an excess of refunds.

(b) *Percentages of Total Collections.* The following table shows the percentages of the total collections represented by returns from each class of taxation for the years 1938-39 and 1944-45 to 1948-49.

COMMONWEALTH TAXATION : PERCENTAGES OF TOTAL COLLECTIONS.

(Per cent.)

Heading.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Customs	42.1	6.4	8.2	11.9	13.7	12.9
Excise	22.3	13.6	13.9	14.6	13.7	12.8
Sales Tax	12.6	8.8	9.5	9.4	8.2	8.0
Flour Tax	2.4	0.6	0.5	0.5	0.2	..
Land Tax	2.0	1.1	1.1	1.0	0.9	0.6
Income Taxes (a) ..	16.0	63.4	55.1	40.7	38.2	37.1
Social Services Contribution ..	..	..	5.7	13.2	16.9	18.4
Pay-roll Tax .. ..	..	3.3	3.2	3.6	3.9	4.0
Gold Tax .. ..	..	0.2	0.1	0.1	..	..
Estate Duty	2.6	1.0	1.1	1.0	1.1	1.0
Gift Duty .. ..	..	0.1	0.1	0.1	0.2	0.1
Entertainments Tax ..	..	1.5	1.4	1.3	1.2	1.1
Wool Levy .. ..	..	..	0.1	..	..	..
Wool Contributory Charge ..	..	..	..	1.2	0.3	0.2
Wheat Tax and Export Charge ..	..	..	..	1.4	1.4	3.7
Stevedoring Industry Charge ..	..	..	..	..	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

(a) See footnote (a) to previous table.

(ii) *Customs Revenue. (a) Classified.* Particulars of net customs revenue for the years 1938-39 and 1944-45 to 1948-49 are shown in the following table:—

COMMONWEALTH NET CUSTOMS REVENUE : CLASSIFICATION.

(£.)

Classes.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Alcs, spirits and beverages ..	1,165,503	505,319	588,378	694,622	940,573	1,171,388
Tobacco and manufactures thereof	3,256,496	4,929,860	4,968,210	7,791,112	10,806,741	14,611,978
Sugar	7,238	6	244		7,122	3,476
Agricultural products and groceries	1,365,938	770,959	937,704	1,099,924	1,442,481	1,301,080
Textiles and attire	2,801,103	1,072,009	1,412,007	3,368,675	5,725,686	6,643,814
Metals and machinery	2,385,882	807,172	1,124,315	2,387,402	4,418,430	5,782,255
Oils, paints, etc.	9,927,346	8,477,532	12,137,483	16,625,724	16,130,193	17,315,862
Earthenware, etc.	509,980	148,037	285,352	514,795	1,102,127	1,088,553
Drugs and chemicals	309,984	177,102	205,006	363,858	436,335	321,856
Wood, wicker and cane	739,057	247,627	331,396	556,210	686,475	992,481
Jewellery and fancy goods	480,016	351,089	557,375	758,058	966,247	1,236,430
Leather and rubber	477,163	223,070	239,472	593,859	809,650	922,784
Paper and stationery	453,548	65,985	92,125	392,066	765,637	485,037
Vehicles	2,061,762	27,094	248,535	2,091,639	2,691,333	3,938,044
Musical instruments	31,589	491	3,433	13,931	50,777	78,220
Miscellaneous articles	1,023,556	689,339	1,321,467	1,446,616	2,788,156	1,825,768
Primaire	3,973,578	2,130,030	3,165,460	6,204,238	7,093,468	5,393,474
Special War Duty .. .. .	..	686,553	1,038,871	628,577	10,492	-6,121
Other receipts	249,823	178,354	235,949	337,177	746,215	358,055
Total Customs Revenue	31,160,462	21,487,538	28,893,682	45,871,085	57,597,154	63,464,434

NOTE.—Minus sign (—) indicates an excess of refunds.

(b) *States.* The following table shows the net Customs Duties collected in each State during the years 1938-39 and 1944-45 to 1948-49.

COMMONWEALTH NET CUSTOMS REVENUE : COLLECTIONS IN EACH STATE.

(£.)

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales (a) ..	11,070,130	10,752,035	13,306,819	20,809,795	25,112,111	16,150,116
Victoria	9,970,730	6,384,988	9,065,158	14,615,959	19,029,924	21,293,148
Queensland	2,977,792	1,915,306	2,720,265	4,286,791	5,338,690	6,474,979
South Australia (b) ..	2,090,020	1,173,606	1,840,267	3,303,044	4,117,100	5,137,827
Western Australia ..	1,653,906	862,161	1,344,621	2,153,351	2,813,807	3,251,449
Tasmania	397,884	398,542	526,552	702,145	885,522	1,156,885
Total	31,160,462	21,487,538	28,893,682	45,871,085	57,597,154	63,464,434

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(iii) *Excise Revenue. (a) Classified.* Particulars of the amount of Net Excise collected under each division during the years 1938-39 and 1944-45 to 1948-49 are given hereunder:—

COMMONWEALTH NET EXCISE REVENUE : CLASSIFICATION.

(£.)

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Beer	7,288,579	21,511,748	22,519,610	27,246,527	27,043,700	31,806,511
Spirits	1,604,220	5,256,415	7,105,129	6,101,353	6,719,900	7,023,179
Tobacco	3,867,983	8,234,055	8,593,368	9,881,397	9,930,607	9,621,979
Cigars and cigarettes ..	2,418,723	7,759,980	7,914,129	9,462,084	9,785,760	9,557,745
Cigarette papers	530,868	707,924	683,658	938,800	1,059,913	807,509
Petrol	581,978	324,612	318,253	866,508	1,810,476	2,238,192
Matches	81,960	1,189,821	1,142,206	1,364,194	1,304,373	1,200,776
Playing cards	11,432	42,475	33,959	45,728	58,042	67,017
Miscellaneous	86,160	572,103	756,650	468,704	294,715	321,873
Total Excise Revenue ..	16,471,903	45,689,133	49,066,962	56,375,304	58,007,486	62,734,781

(b) *States.* Net Excise collections in each State for the years 1938-39 and 1944-45 to 1948-49 were as follows:—

COMMONWEALTH NET EXCISE REVENUE : COLLECTIONS IN EACH STATE.
(£.)

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales (a) ..	6,940,301	21,325,832	22,930,149	27,899,853	22,486,303	25,522,532
Victoria	5,687,832	14,455,468	15,550,390	16,633,229	18,474,650	18,561,270
Queensland	1,538,042	3,886,363	3,834,688	4,342,885	6,601,030	7,101,552
South Australia (b) ..	1,018,148	2,628,509	2,781,370	3,188,665	4,846,428	5,329,031
Western Australia ..	1,103,481	2,807,629	3,213,743	3,123,347	4,617,625	5,116,978
Tasmania	184,099	585,332	756,622	887,325	981,450	1,103,400
Total	16,471,903	45,689,133	49,066,962	56,375,304	58,007,486	62,734,781

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(iv) *Other Taxation.* (a) *General.* Taxes other than Customs and Excise are, in general, assessed and collected by the Commissioner of Taxation. The organization comprises an office in each State assessing the returns of taxpayers whose interests are restricted to that State only, and a Central Office assessing taxpayers whose interests are in more than one State. Taxes, however, may be paid to any office, so that the sums actually received by any office do not correspond to the assessments made by that office and frequently differ by very large amounts. For example, therefore, the actual receipts of income tax by the Queensland State office may include tax in respect of Central Office or New South Wales assessments, and, therefore, may not be a proper measure of income tax paid on account of income derived in Queensland.

The actual receipts by the various offices are the figures of necessity used by the Treasury for accounting purposes, and may be called the "Treasury" figures. In order to show a more significant picture of the taxation in each State, figures furnished by the Commissioner of Taxation, which refer strictly to the assessments made by the State office concerned, are used in the following tables. The totals of these figures do not quite agree with the total Treasury figures shown on page 760, owing to certain technicalities of accounting. The Taxation Office figures present a fair comparison between States, e.g., in taxation paid per head, but do not give the absolute measure of taxation, because the Central Office collections, which include taxation on account of all States, have not been allocated to the States. In the absence of precise information, it may be assumed, as a rough approximation, that Central Office collections may be divided among States in proportion to State office collections. It is probable, however, that a somewhat larger share is derived from the more populous States, New South Wales and Victoria.

(b) *Land Tax.* Commonwealth Land Tax was first imposed on the unimproved value of land in 1910-11. The following table shows the rates of Land Tax imposed for each assessment year from 1940-41 to 1949-50:—

LAND TAX : RATE OF TAX PER £1 OF TAXABLE VALUE.

(T = Taxable Value.)

(Pence.)

Assessment Year.	Residents.			Absentees.(a)					
	If the Taxable Value is from £1 to £75,000—	If the Taxable Value is over £75,000—		If the Taxable Value is from £1 to £80,000—		If the Taxable Value is over £80,000—			
		On £75,000—	On excess over £75,000—	On first £5,000—	On excess over £5,000—	On £5,000—	On next £75,000—	On excess over £80,000—	
1940-41 to 1949-50 (b)	$\left(1 + \frac{T}{18,750}\right)$	5.0	9.0	1.0	$\left(2 + \frac{T-5,000}{18,750}\right)$	1.0	6.0	10.0	

(a) Absentees are not allowed an exemption of £5,000 granted to residents.

(b) In addition, if the taxable value exceeds £20,000, there is payable for 1941-42 and subsequent years a super tax equal to the lesser amount of the following:—(i) twenty per cent. of the amount of land tax; or (ii) one per cent. of the amount by which the taxable value of the land exceeds £20,000.

Under the National Security (Values for Land Tax) Regulations the revaluations of land for the purposes of the Land Tax Assessment Act 1910-1940 were postponed until after the war. Thereby the values of land, or of interests in land, as assessed for the financial year 1939-40, were adopted for the financial year 1940-41 and subsequent years for the duration of the war. Under section 10 of the Defence (Transitional Provisions) Act 1946-1949 the provisions of the National Security (Values for Land Tax) Regulations were incorporated in the Land Tax Assessment Act 1910-1949 and revaluations of land for purposes of the Act were postponed until after the assessment year commencing on 1st July, 1950.

Land Tax receipts in each State and Central Office for the years 1938-39 and 1944-45 to 1948-49 were as follows. The receipts referred to in this table differ slightly from the collections shown on page 760 because some refunds credited before 30th June were not paid until after that date.

LAND TAX RECEIPTS.

(£.)

State, etc.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Central Office ..	525,959	1,386,039	1,493,445	1,500,037	1,460,065	1,164,679
New South Wales ..	509,913	1,224,776	1,174,787	1,202,023	1,189,414	1,041,299
Victoria ..	290,798	699,162	690,445	690,824	656,277	551,848
Queensland ..	29,568	63,801	62,579	61,604	62,441	60,486
South Australia ..	55,280	137,338	137,705	131,481	118,121	121,967
Western Australia ..	63,854	116,015	112,158	106,695	101,875	96,571
Tasmania ..	12,879	37,666	37,508	37,114	33,335	32,114
Total ..	1,488,251	3,664,797	3,708,627	3,729,778	3,621,528	3,068,964

(c) *Estate Duty.* The Commonwealth Estate Duty was first levied in 1914. Particulars of exemptions and the rates imposed prior to 1940 are given in earlier issues of the Year Book (*see* No. 37, page 614).

Estate Duty, under the Estate Duty Assessment Act 1940, is assessed on the net value of the estate less a statutory exemption determined in accordance with the following formula :—(a) where the whole of the estate passes to the widow, children or grand-children of the deceased, the sum of £2,000 decreasing by £1 for every £10 by which the value exceeds £2,000 up to £10,000, and thereafter decreasing by £1 for every £2 by which the value exceeds £10,000; (b) where no part of the estate passes to the widow, children or grand-children, the sum of £1,000 decreasing by £1 for every £10 by which the value exceeds £1,000 up to £6,000, and thereafter decreasing by £1 for every £8 by which the value exceeds £6,000; and (c) where part only of the estate passes to the widow, children or grand-children, the statutory exemption is to be calculated proportionately under (a) and (b).

The rates of duty, which increase as the value of the estate increases are :—£1 to £10,000, 3 per cent.; £10,001 to £20,000, 3 per cent. to 6 per cent.; £20,001 to £120,000, 6 per cent. to 26 per cent.; £120,001 to £500,000, 26 per cent. to 27.9 per cent.; over £500,000 27.9 per cent.

Particulars of the collections in each State and Central Office for the years 1938-39 and 1944-45 to 1948-49 are shown in the following table. These figures differ slightly from the figures on page 760 as some refunds were credited before 30th June and not paid until after that date.

ESTATE DUTY RECEIPTS.

(£.)

State, etc.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Central Office ..	999,202	1,102,540	1,818,735	1,592,910	2,046,170	1,993,042
New South Wales ..	422,567	696,499	697,960	790,670	988,152	1,121,094
Victoria ..	294,406	819,147	811,441	1,062,204	907,176	1,044,527
Queensland..	60,041	141,596	183,006	248,806	290,778	225,089
South Australia ..	82,789	166,020	143,930	167,436	244,797	191,776
Western Australia ..	34,074	135,055	91,614	84,582	108,453	132,479
Tasmania ..	15,960	30,616	33,935	55,666	56,352	52,560
Northern Territory ..	..	..	..	101	Cr. 4	471
Total ..	1,909,039	3,091,473	3,779,721	4,002,375	4,641,874	4,761,038

Particulars of the number and value of estates with duty assessed, for each of the assessment years 1938-39 and 1944-45 to 1948-49, are given in the following table :—

ESTATE DUTY ASSESSMENTS.

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Number of Estates ..	9,681	9,754	9,337	10,988	12,082	12,350
Gross Value Assessed £'000	65,699	74,186	74,154	87,354	95,373	99,717
Deductions .. £'000	12,630	13,248	13,024	15,292	15,537	16,475
Statutory Exemption £'000	..	11,654	11,034	12,973	14,166	14,402
Dutiable Value .. £'000	53,069	49,284	50,096	59,089	65,670	68,840
Duty Payable .. £	2,002,283	3,322,989	3,811,844	4,230,900	4,883,702	4,902,352
Average dutiable value .. £	5,482	5,053	5,377	5,378	5,435	5,574
Average duty per estate .. £	207	341	409	385	404	397

(d) *Gift Duty.* The Gift Duty Assessment Act 1941-1947 and the Gift Duty Act 1941-1947 impose a gift duty on all gifts made after the 29th October, 1941. A gift has been defined as any disposition of property, which is made otherwise than by will, without adequate consideration in money or money's worth.

There is a liability on both the donor and the donee to furnish a return, and both are jointly and severally liable for payment of the duty.

The following rates of duty have been fixed by the Gift Duty Act 1941-1947 :—

Value of all Gifts made within Eighteen Months.	Rate of Duty.
Not exceeding £2,000 (a) ..	Nil
£2,001 (a) to £10,000 ..	3%
£10,001 to £20,000 ..	3% to 6%
£20,001 to £120,000 ..	6% to 26%
£120,001 to £500,000 ..	26% to 27.9%
£500,001 and over ..	27.9%

(a) Prior to 3rd June, 1947, no duty was payable if the value of all gifts as defined above did not exceed £500. If the value of all gifts exceeded £500 but did not exceed £10,000 the rate of duty was 3 per cent

An amendment which operated from 3rd June, 1947 provided that gift duty will not exceed one half of the amount by which the value of the gift exceeds £2,000.

The receipts from gift duty in each State for the years 1944-45 to 1948-49 are shown in the following table. The figures shown in the table differ from those shown on page 760 because certain refunds credited before 30th June were not paid until after that date.

GIFT DUTY RECEIPTS.

(£.)

State, etc.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	135,810	184,772	194,946	393,523	261,643
Victoria ..	110,339	106,014	203,458	199,099	173,159
Queensland ..	30,974	31,898	43,665	52,504	34,181
South Australia ..	30,075	36,829	44,328	107,003	64,857
Western Australia ..	11,953	23,128	44,653	24,353	36,653
Tasmania ..	6,008	9,172	6,542	7,121	10,914
Northern Territory ..	118	15	86	91	7
Total ..	325,277	391,828	537,678	783,694	581,414

(e) *Income Taxes.* Details of taxes on income are given in Section "E" of this Chapter.

(f) *Pay-roll Tax.* The Pay-roll Tax Assessment Act 1941-42 and the Pay-roll Tax Act 1941 imposed a pay-roll tax of 2½ per cent. on all wages in excess of £20 per week paid by an employer after 30th June, 1941. These measures formed part of the Commonwealth scheme of child endowment, the revenue from the tax being designed to provide the main part of the money required.

Pay-roll tax is collected in a similar manner to sales tax. Employers are required to register and to furnish a monthly return of all wages paid.

The following table shows the receipts from pay-roll tax in each State for the years 1944-45 to 1948-49. The figures shown vary slightly from the collections shown on page 760 because some refunds which were credited before 30th June were not paid until after that date.

PAY-ROLL TAX RECEIPTS.

(£.)

State, etc.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	4,837,455	4,942,715	5,793,035	7,313,109	8,534,902
Victoria ..	3,123,364	3,294,748	3,874,667	4,747,145	5,645,022
Queensland ..	1,365,981	1,403,298	1,609,848	1,876,000	2,356,549
South Australia ..	853,874	879,299	1,085,430	1,284,780	1,588,615
Western Australia ..	608,497	653,624	813,885	919,055	1,119,075
Tasmania ..	286,689	314,663	368,412	459,227	538,614
Northern Territory ..	3,909	4,385	8,840	14,100	18,749
Total ..	11,079,769	11,492,732	13,554,117	16,613,416	19,801,526

(g) *Gold Tax.* The Gold Tax Collection Act 1939-1940 and the Gold Tax Act 1939 imposed a tax on all gold delivered to the Commonwealth Bank of Australia or to an agent of that Bank, on and after 15th September, 1939, of 50 per cent. of the amount by which the price payable by the Bank for each fine ounce of gold delivered exceeded £9. This tax was suspended from 20th September, 1947, by the Gold Tax Suspension Act 1947. The amounts of tax collected during the five years 1944-45 to 1948-49 were as follows :—1944-45, £342,457; 1945-46, £383,552; 1946-47, £556,435; 1947-48, £10,713; and 1948-49, Dr. £4,605.

(h) *Entertainments Tax.* The Entertainments Tax Assessment Act 1942-1946 and Entertainments Tax Act 1942-1949 came into force on 1st October, 1942, following the agreement of the State Governments to the request of the Commonwealth to suspend their entertainments tax legislation for the duration of the war and one year after. This enabled the Commonwealth Government to re-enter this field of taxation. Until 1945-46 the Commonwealth recompensed the States by annual payments of £765,787, an amount equal to that collected by the States during the year 1941-42. Thereafter these payments were discontinued and the agreement that the States should not levy a tax on entertainments was terminated.

The rates of entertainments tax from 1st October, 1949 are shown in the following table. Details of rates operating prior to 1st October, 1949 are given in earlier issues of the Official Year Book (*see* No. 37, page 617).

RATES OF ENTERTAINMENTS TAX OPERATING FROM 1st OCTOBER, 1949.

Amount paid for Admission (excluding amount of Tax).			Reduced Rates.		Full Rates.	
Exceeding—	But not exceeding—					
s. d.	1s.	od.	s. d.		s. d.	
			Nil		0 2	
			Nil		0 4	
1 0		1 3	0 3		0 4	
1 3		1 6	0 4		0 5	
1 6		2 0	0 5		0 7	
2 0		2 6	0 6		0 9	
2 6		3 0	0 8		0 10	
3 0		3 6	0 9		1 0	
3 6		4 0	0 10		1 1	
4 0		4 6	0 11		1 3	
4 6		5 0	1 1		1 5	
5 0		5 6	1 3		1 8	
5 6		6 0				
6 0		..				
			1s. 5d. plus 1½d. for each 6d. (or part thereof) by which the payment for admission exceeds 6s. 6d. (a)		1s. 10d. plus 2½d. for each 6d. (or part thereof) by which the payment for admission exceeds 6s. 6d. (a)	

(a) Fractions of a penny in the amount of tax are treated as follows :—½d. and ¼d. are disregarded—½d. is taken as one penny.

The reduced rates of tax apply to entertainments which consist of one or more of the following items, viz. :—a stage play, a ballet, a performance of music, a lecture, a recitation, a music hall or other variety entertainment, or a circus or travelling show, and to entertainments which consist solely of a game or sport in which human beings are the sole participants and the entertainment is conducted by a society which is not established or carried on for profit. The full rates apply to all other forms of entertainment. Entertainments tax is not charged on admissions to entertainments the proceeds of which are devoted to public, patriotic, philanthropic, religious or charitable purposes or where the entertainment is of an educational or scientific character.

Entertainments tax received during the five years 1944-45 to 1948-49 is shown in the following table. The figures shown in the table differ from those shown on page 760 because certain refunds credited before 30th June were not paid until after that date.

ENTERTAINMENTS TAX RECEIPTS.

(£.)

State, etc.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	2,111,965	2,151,095	2,141,470	2,180,923	2,225,805
Victoria ..	1,395,214	1,410,877	1,534,445	1,571,504	1,600,908
Queensland ..	819,756	753,310	664,700	661,314	646,887
South Australia ..	290,948	355,131	382,004	364,365	400,066
Western Australia ..	247,709	277,111	281,636	278,509	280,958
Tasmania ..	106,133	120,431	127,699	126,691	129,278
Northern Territory ..	3,744	2,666	6,671	6,268	6,772
Total ..	4,975,469	5,071,221	5,138,625	5,198,574	5,290,764

In the following table details are given of the number of admissions on which entertainments tax was paid during the year ended 30th June, 1949.

COMMONWEALTH ENTERTAINMENTS TAX : NUMBER OF ADMISSIONS TO TAXABLE ENTERTAINMENTS, 1948-49.

('000.)

Price of Admission (before Tax).		Theatres.	Picture Theatres.	Racing.	Dancing and Skating.	Sport.	Other.	Total.
s. d.	s. d.							
1 0	..	30	28,945	1,085	483	672	576	31,791
1 0½	1 6	150	37,983	289	2,549	1,325	624	42,920
1 6½	2 0	418	34,666	1,186	4,000	2,005	1,020	43,295
2 0½	2 6	265	20,657	1,754	1,276	531	487	24,970
2 6½	3 0	406	3,847	586	407	310	473	6,020
3 0½	3 6	73	4,271	1,810	165	75	88	4,482
3 6½	4 0	561	696	1,113	145	85	503	3,103
4 0½	4 6	63	639	150	27	2	22	903
4 6½	5 0	386	89	163	62	110	339	1,149
5 0½	5 6	74	79	479	43	4	32	711
5 6½	6 0	369	..	443	52	92	161	1,117
6 0½	6 6	19	..	160	22	..	4	205
6 6½	7 0	556	..	21	20	4	95	666
7 0½	7 6	154	..	294	99	39	48	634
7 6½	8 0	257	..	42	53	2	7	301
8 0½	8 6	4	..	3	4	..	3	14
8 6½	9 0	45	..	88	74	3	2	212
9 0½	9 6	..	..	314	14	..	..	328
9 6½	10 0	297	..	327	8	19	40	601
Over 10 0	..	66	..	935	55	23	92	1,171
		4,193	129,872	11,242	9,558	5,301	4,616	164,782

There were 7,556,000 admissions at the reduced rate, and 157,226,000 at the full rate.

(i) *Sales Tax.* The sales tax was first imposed in August, 1930. The operation of the tax is controlled chiefly by a system of registration of taxpayers whereby all manufacturers and wholesale merchants, who are the taxpayers under the Act in respect of goods sold in Australia, must be registered with the Department. The tax on imports subject to sales tax is collected by the Customs Department at ports of entry.

Since the inception of the tax certain exemptions have been allowed. These exemptions, which have been extended from time to time, relate mainly to goods of an essential nature or for use in primary production. The most recent exemptions were those granted from 9th September, 1948, and 8th September, 1949. The existing rates

of Sales Tax are $8\frac{1}{2}$ per cent. (general rate) and 25 per cent. effective from 8th September, 1949. For particulars of rates applicable since the inception of Sales Tax in August, 1930 see Official Year Book No. 37, page 617.

Particulars of the net amount of sales tax payable, and the sales of taxable, non-taxable and exempt goods in each State for 1948-49 are given in the following table. The figures for "Tax Collected" are in respect of the periods 1st July to 30th June of each year, adjusted on account of rebates of tax allowed as deductions in returns of taxpayers, while those relating to sales are in respect of the periods 1st June to 31st May.

SALES TAX AND AMOUNT OF SALES, 1948-49. (£'000.)

State, etc.	Gross Taxable Sales.	Non-Taxable Sales.	Sales of Exempt Goods by Registered Persons.	Net Amount of Sales on which Sales Tax was payable.	Tax Collected.		
					Taxation Department.	Customs Department.	Total.
New South Wales ..	158,289	257,225	292,313	147,105	15,611	1,035	16,646
Victoria ..	114,737	185,386	231,138	105,841	11,271	689	11,960
Queensland ..	44,808	28,100	73,559	43,448	4,424	206	4,630
South Australia ..	30,815	38,270	65,897	27,892	2,893	234	3,127
Western Australia ..	18,523	11,694	45,149	17,972	1,925	158	2,083
Tasmania ..	6,488	6,251	18,639	6,182	582	51	633
Northern Territory	139	15	698	132	16	..	16
Total ..	373,799	526,941	727,393	348,572	36,722	2,373	39,095

Similar details for Australia as a whole for the years 1938-39 and 1944-45 to 1948-49 are given in the following table :—

SALES TAX AND AMOUNT OF SALES. (£'000.)

Year.	Gross Taxable Sales.	Non-Taxable Sales.	Sales of Exempt Goods by Registered Persons.	Net Amount of Sales on which Sales Tax was payable.	Tax Collected.		
					Taxation Department.	Customs Department.	Total.
1938-39 ..	197,809	171,810	280,282	183,296	8,559	758	9,317
1944-45 ..	235,117	351,197	389,088	218,202	28,803	884	29,687
1945-46 ..	268,773	341,759	383,151	248,679	32,559	1,152	33,711
1946-47 ..	295,822	416,469	472,854	277,003	34,642	1,739	36,381
1947-48 ..	315,013	469,805	623,101	292,387	32,457	2,429	34,886
1948-49 ..	373,799	526,941	727,393	348,572	36,722	2,373	39,095

In the foregoing tables exempt sales relate to goods exempted from sales tax under the Sales Tax (Exemptions and Classifications) Act 1935-1949, while non-taxable sales relate to goods on which tax is not payable at the time of sale. In this latter case the sale has been made to a registered taxpayer who has quoted his certificate. These sales, however, become taxable before passing into consumption, unless used for a purpose exempted under the Act.

The figures given in the foregoing tables do not represent the total sales of all commodities, as vendors trading in exempt goods only are not required to be registered and consequently the volume of their sales is not included in the statistics above.

(j) *Flour Tax.* Particulars of the rates of flour tax which operated from 4th December, 1933 to 21st December, 1947 are given in Official Year Book No. 37, pages 618 and 619. Because of the rise in wheat prices the rate was declared to be nil as from 22nd December, 1947.

Net receipts after allowing for refunds and tax outstanding are shown in the following table for the years 1938-39 and 1944-45 to 1948-49. The figures vary slightly from the collections shown on page 760 because some refunds were credited before 30th June, but not paid until after that date.

FLOUR TAX RECEIPTS.

(£.)

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	704,152	803,791	681,000	683,733	373,713	-2,993
Victoria ..	531,577	545,935	457,487	461,351	256,897	-4,136
Queensland ..	237,854	307,596	234,774	253,110	134,567	-454
South Australia ..	141,048	129,878	174,512	140,829	80,639	-1,256
Western Australia ..	123,856	107,439	139,369	112,832	63,838	1
Tasmania ..	55,346	55,757	53,190	54,768	31,553	..
Total ..	1,793,833	1,950,396	1,740,332	1,706,623	941,207	-8,838

NOTE.—Minus sign (—) indicates an excess of refunds.

(k) *Wool Levy.* The Wool Tax Act 1936 and Wool Tax Assessment Act 1936 provided for a levy on all wool grown in Australia and shorn on or after 1st July, 1936. The levy is collected through wool-brokers and dealers who furnish quarterly returns on which the levy is assessed. On wool, not previously taxed in the hands of a broker or dealer, the levy is payable prior to export. The rates fixed by the Wool Tax Act 1936 were: 6d. per bale; 3d. per fadge or butt; and 1d. per bag. By the Wool Tax Act 1945 these rates were increased from 1st June, 1945 to 2s. per bale; 1s. per fadge or butt; and 4d. per bag. Proceeds are devoted to publicity and research in connexion with the wool industry. This levy has been suspended for any period during which the Wool (Contributory Charge) Act 1945 is in operation. The Wool Contributory Charge was levied from 1st July, 1946 and only arrears of wool levy have been collected since that date. The amounts collected from wool levy during the years 1938-39 and 1944-45 to 1948-49 were as follows:—

WOOL LEVY RECEIPTS.

(£.)

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	28,889	29,197	113,850	4,176	458	..
Victoria ..	15,493	16,519	45,513	983	..	..
Queensland ..	14,451	13,409	58,496	4,871	..	..
South Australia ..	8,243	8,063	21,070	715	..	..
Western Australia ..	5,795	6,695	26,118	842	..	..
Tasmania ..	1,525	1,309	4,708	41	..	..
Total ..	74,396	75,192	269,755	11,628	458	..

(l) *Wool Contributory Charge.* The Wool (Contributory Charge) Act 1945 and the Wool (Contributory Charge) Assessment Act 1945 imposed a charge on all wool produced in Australia and sold, manufactured or exported after a date fixed by proclamation.

Wool sold by the Australian Wool Realization Commission is not liable to the charge. The rate of the charge is to be such a percentage of the sale value of the wool as is necessary to provide the following amounts:—

- (a) The amounts required to meet the share of the industry in the operating expenses of the Joint Organization for the disposal of wool stocks;
- (b) the amounts required for payment of interest on the amount spent by the Commonwealth in purchase of wool under the disposals plan; and
- (c) the amount of the wool levy.

The Acts came into operation on 1st July, 1946, and the rate fixed was 5 per cent. on the sale value of the wool. From 1st August, 1947 the rate was reduced to 0.75 per cent. Collections in each State during the years 1946-47 to 1948-49 are shown in the following table:—

WOOL CONTRIBUTORY CHARGE RECEIPTS.

(£.)

State.					1946-47.	1947-48.	1948-49.
New South Wales	..	..	..	..	1,554,997	502,281	315,280
Victoria	..	..	..	..	1,315,834	359,574	294,734
Queensland	..	..	..	..	747,298	248,589	192,143
South Australia	..	..	..	..	399,372	154,161	107,939
Western Australia	..	..	..	..	389,879	134,084	99,873
Tasmania	..	..	..	..	89,727	25,173	19,141
Total	..	..	..	..	4,497,107	1,423,862	1,029,110

(m) *Wheat Export Charge and Wheat Tax.* The Wheat Export Charge Acts 1946 imposed an export charge on wheat (including the content of wheat products) harvested after 30th September, 1945 and exported from the Commonwealth after 30th November, 1945. These acts did not apply to wheat harvested between 1st October, 1945 and 1st October, 1947 and exported by the Australian Wheat Board, but provision was made in the Wheat Tax Act 1946 to collect an amount equivalent to the charge that would have been collected on this wheat, by imposing a tax on wheat acquired by the Board. There were no collections under the Wheat Export Charge Acts 1946, but collections under the Wheat Tax Act 1946, which came into operation on 9th August, 1946 and imposed a tax on all wheat of the 1945-46 and 1946-47 seasons acquired by the Australian Wheat Board, amounted to £5,500,000 in 1946-47 and £5,729,780 in 1947-48. These amounts were paid to the Wheat Prices Stabilization Fund and, under the Wheat Tax (Refund and Repeal) Act 1948, were refunded to growers. The amount of the refund was £11,548,637 (including interest, £318,857).

The Wheat Export Charge Act 1948, which operated from 25th November, 1948, repealed the Wheat Export Charge Acts 1946 and provided for an export charge on all wheat and wheat products of the 1947-48 and subsequent seasons exported after 25th November, 1948. Subject to a lower rate being prescribed, the rate of charge per bushel of wheat exported by the Australian Wheat Board was fixed at 50 per cent. of the amount by which the average price per bushel of all wheat exported by the Board exceeded the guaranteed price, with a maximum charge of 2s. 2d. per bushel. If the exporter is not the Australian Wheat Board the charge is the same except that there is no maximum charge of 2s. 2d. per bushel.

The guaranteed price for the 1947-48 season was 6s. 3d. per bushel for all fair average quality bulk wheat f.o.r. at the ports of export. It was raised to 6s. 8d. per bushel for the 1948-49 season and to 7s. 1d. for the 1949-50 season. Unless Parliament otherwise provides the act shall not apply to wheat harvested after 30th September, 1953.

Under the Wheat Industry Stabilization Act 1946-48 an amount equivalent to the charges collected under the Wheat Export Charge Act 1948 is paid to the Wheat Prices Stabilization Fund. Out of this fund payments shall be made to the Australian Wheat Board, when required, for the purpose of building up the average export price for any season to the guaranteed price.

Collections of Wheat Export Charge amounted to £18,086,150 in 1948-49.

(n) *Stevedoring Industry Charge.* The Stevedoring Industry Charge Act 1947 and the Stevedoring Industry Charge Assessment Act 1947 imposed a charge of 4½d. per man-hour on the employer of a waterside worker after 22nd December, 1947.

The amounts received are paid to the Stevedoring Industry Board for the payment of attendance money to waterside workers and for other expenses of the Board.

From 11th October, 1949 the charge was reduced to 2½d. per man hour.

Collections in each State during the years 1947-48 and 1948-49 are shown in the following table:—

STEVEDORING INDUSTRY CHARGE RECEIPTS.

(£.)

State.	1947-48.	1948-49.
New South Wales	101,833	233,964
Victoria	65,332	164,727
Queensland	31,562	113,069
South Australia	27,608	72,567
Western Australia	17,563	44,835
Tasmania	16,467	38,593
Northern Territory .. .. .	..	2,404
Total	260,365	670,219

3. *Business Undertakings.*—(i) *Postmaster-General's Department.* Particulars of net receipts for each of the financial years 1938-39 and 1944-45 to 1948-49 are contained in the following table:—

POSTMASTER-GENERAL'S DEPARTMENT: NET RECEIPTS.

(£.)

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Private boxes and bags	74,235	86,670	91,809	96,484	85,689	93,514
Commission on money orders and postal notes	288,580	308,226	315,424	347,959	374,285	408,309
Telegraphs	1,372,300	3,186,495	3,321,343	2,904,538	2,843,959	2,991,326
Telephones	8,039,580	12,270,788	12,583,701	13,317,289	14,183,604	15,055,458
Postage	6,635,977	10,714,085	10,806,923	11,628,882	12,372,758	12,734,873
Radio	516,178	660,986	671,571	782,023	797,956	1,191,521
Miscellaneous	439,461	644,561	664,567	725,115	741,403	831,700
Total	17,366,311	27,871,811	28,455,338	29,802,290	31,389,654	33,306,701

Further particulars of the Postmaster-General's Department's receipts to 1947-48 are given in Chapter V. "Transport and Communication" (part I. Posts, Telegraphs, Telephones and Wireless).

(ii) *Commonwealth Railways.* The Commonwealth Government is responsible for four railways—the Trans-Australian, the Central Australia, the North Australia and the Australian Capital Territory. The following table shows the amounts paid to the credit of the Consolidated Revenue Fund on account of each of these railways for the years 1938-39 and 1944-45 to 1948-49 :—

COMMONWEALTH RAILWAY REVENUE.
(£.)

Railway.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Trans-Australian ..	330,643	989,194	768,885	691,740	754,360	888,512
Central Australia ..	137,521	1,045,423	710,648	395,377	383,630	679,161
North Australia ..	50,471	819,884	174,371	58,140	37,549	28,839
Aust. Cap. Territory..	7,275	11,334	10,496	9,260	14,621	9,084
Total ..	525,910	2,865,835	1,664,400	1,154,517	1,190,160	1,605,596

Further particulars to 1947-48 are given in Chapter V. "Transport and Communication" (part B. Railways).

4. *Other Sources of Revenue.*—Of other sources of revenue, amounting in 1948-49 to £27,913,521, the following are noteworthy; Interest, £1,532,371; Civil Aviation, £1,997,614; Net Profit on Australian Note Issue, £4,459,903; and Surplus balances of Trust accounts, £17,000,000.

Division III.—Expenditure.

1. *Nature of Commonwealth Expenditure.*—The disbursements by the Commonwealth Government of the revenue collected by it fell naturally, under the "book-keeping" system, into three classes, namely :—

- (a) Expenditure on transferred services; (b) expenditure on new services; and (c) payments of surplus revenue to the States.

Of these three, only the first two were actual expenditure, the last being merely a transfer, the actual expenditure being incurred by the States. In accordance with the provisions of the Constitution, the expenditure on transferred services was, under the "book-keeping" system, debited to the several States in respect of which such expenditure was incurred, while the expenditure on new services was distributed *per capita*. Surplus Commonwealth revenue was paid to the States monthly. Until the end of the year 1903-4, new works, etc. for transferred departments were treated as transferred expenditure, and were charged to the States on whose behalf the expenditure had been incurred. In subsequent years all such expenditure was regarded as expenditure on new services, and distributed amongst the States *per capita*. Under the arrangement which superseded the "book-keeping" system, a specific subsidy of 25s. per head of population was made annually by the Commonwealth to the States, and there was no further debiting of expenditure to the several States. The States Grants Act 1927 provided for the abolition of the *per capita* payments as from 30th June, 1927. From 1st July, 1928 the temporary provisions of the agreement between the Commonwealth and the several States under the Financial Agreement Act 1928 were operative, and on 1st July, 1929 the Commonwealth Government took over the debts of the States under this agreement which was ratified by all Governments concerned. For further particulars of Commonwealth payments to States see pages 785-790.

2. *Details of Expenditure from Consolidated Revenue.*—(i) *General.* The following table gives details of the expenditure from Consolidated Revenue during the years 1938-39 and 1944-45 to 1948-49.

* For an exposition of the "book-keeping" system see Official Year Book No. 6, p. 780.

COMMONWEALTH EXPENDITURE FROM CONSOLIDATED REVENUE.

(£.)

Departments, etc.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Defence Services(a)(b)					72,435,607 (d)	56,766,584 (d)
War (1939-45) and Repatriation Services (a) ..	8,061,359	194,573,719	225,651,219	195,433,151 (c)	108,432,174 (d)	134,563,017 (d)
War (1914-18) and Repatriation Services (d)(e) ..	19,256,812	19,288,874	18,891,883	19,259,227	19,674,353	21,646,855
Total Cost of Departments(d) ..						
Governor-General ..	32,765	49,121	34,537	46,603	44,843	52,297
Parliament ..	444,873	603,401	550,326	735,576	838,474	770,893
Prime Minister ..	(f) 1,355,842	1,616,036	1,920,480	2,429,247	3,032,395	3,626,767
External Affairs ..	70,168	244,048	562,538	1,305,271	1,841,585	1,661,418
Treasury ..	2,257,628	3,935,301	4,149,907	4,764,456	5,746,058	6,170,252
Attorney-General ..	281,497	433,646	472,004	569,234	688,572	745,106
Interior ..	91,275,392	855,575	953,211	1,094,651	1,357,046	1,682,289
Works and Housing ..	(h)	48,910	108,836	1,600,844	1,752,369	1,997,495
Civil Aviation ..	328,150	438,531	738,908	1,258,312	3,859,020	5,027,611
Trade and Customs ..	1,064,124	873,457	983,746	1,446,930	1,691,475	1,865,498
Health ..	338,155	392,602	428,788	473,392	580,892	767,554
Commerce and Agriculture ..	994,095	2,613,324	1,544,875	4,409,639	5,023,917	5,155,044
Social Services ..	324,734	443,260	605,927	776,129	801,152	1,072,801
Supply and Development ..	(i)	(i)	(i)	(i)	(i)	820,938
Shipping and Fuel ..	214,832	272,865	279,800	331,965	5,222,124	3,783,724
External Territories ..	(j)	35,374	45,214	55,797	55,240	74,890
Immigration ..	(k)	32,420	72,551	183,219	1,411,007	3,588,938
Labour and National Service ..	(l)	(l)	(l)	1,127,430	1,276,940	1,328,190
Transport ..	(l)	(l)	(l)	57,422	69,785	163,729
Information ..	(l)	(l)	(l)	342,280	340,795	357,392
Post-war Reconstruction ..	(l)	(l)	(l)	559,716	756,169	755,595
Social Services (k) ..	16,428,396	36,702,821	(l)	(l)	(l)	(l)
National Welfare Fund ..	..	30,000,000	46,499,243	64,646,736	82,042,612	110,057,990
Business Undertakings(d) —						
Postmaster-General ..	15,028,233	23,993,463	24,774,998	26,755,701	32,171,144	40,919,118
Railways ..	1,351,041	2,794,796	2,189,262	1,921,172	2,088,611	2,594,320
Territories(d) ..	1,099,960	1,042,520	1,208,007	3,291,305	4,188,480	5,768,176
Capital Works and Services (m)	6,565,268	5,705,351	6,659,952	17,180,202	25,501,587	42,639,224
Payments to or for States—						
Interest on States' Debts (n)	7,584,912	7,584,912	7,584,912	7,584,912	7,584,912	7,584,912
Sinking Fund on States' Debts	1,477,976	1,683,866	1,615,604	1,630,120	1,731,853	1,851,833
Special Grants ..	2,020,000	2,846,000	2,996,000	4,783,000	6,042,000	7,450,000
Commonwealth and Federal						
Aid Roads and Works ..	4,266,550	2,200,902	3,327,553	4,805,290	6,707,426	7,630,788
Income Tax Reimbursement	..	32,666,316	32,755,270	(o)	(o)	(o)
Income Tax Reimbursement—						
Special Grants ..	..	..	553,172	2,132,920	..	..
Entertainment Tax Reimbursement ..	..	765,787	765,787	(o)	(o)	(n)
Tax Reimbursement ..	..	(o)	(o)	39,463,848	44,588,023	53,487,792
Other Grants ..	390,000	122,035	16,052	10,103	5,701	599,021
Total to or for States	15,649,444	47,868,821	49,614,350	60,381,193	66,659,915	78,604,396
Primary Production Self Balancing items (p) ..	92,014,713	1,995,775	1,779,238	18,819,507	8,913,981	19,329,071
Grand Total ..	94,437,481	376,854,101	390,780,401	431,256,307	464,481,699	554,377,372
Per Head of Population	£ s. d. 13 12 5	£ s. d. 51 5 8	£ s. d. 52 12 0	£ s. d. 57 7 2	£ s. d. 60 15 1	£ s. d. 71 1 8

(a) For details, see p. 7, para. 714-6.

(b) Departments of Navy, Army, Air and Supply and Shipping.

(c) Excludes Repatriation Capital Works and Services.

(d) For details, see § 6, page 793.

(e) Includes External Territories.

(f) Includes with Int. r. (i) Included under Defence Services and War (1939-45) and Repatriation Services.

(g) Included with Prime Minister.

(h) For details, see table, page 780.

(i) Excludes Defence Services prior to 1946-47 and War (1939-45) Services.

(j) Excludes Repatriation Capital Works and Services.

(k) Excludes balance of interest payable on States' Debts (recoverable from States).

(l) Income and Entertainment Tax Reimbursements.

(m) Grants were replaced by Tax Reimbursement Grants from 1946-47. See page 786-7.

(n) In addition, the following amounts were provided for assistance to primary producers under War services' expenditure—1944-45, £14,280,284; 1945-46, £19,755,385; 1946-47, £7,719,605; 1947-48, £10,808,117; and 1948-49, £8,248,323.

(o) Assistance to primary producers.

Particulars for each department include interest, sinking fund, superannuation charges, etc., but do not include the expenditure on capital works and services which is given in (iii) page 785 nor that on Defence, War (1939-45) and Repatriation Services which is given in § 7, pages 794-6. Details of expenditure of each department are given in paragraph (ii) below.

(ii) *Total Cost of Departments.* (a) *Introductory.* Under the heading "Total Cost of Departments" are included (i) particulars of expenditure on the estimates of departments in respect of salaries and general expenses, and (ii) particulars of expenditure from special appropriations in respect of salaries of the Governor-General, Ministers, Judges, etc., Government contributions for superannuation, and interest and sinking fund charges, etc., allocated to departments. Expenditure from appropriations for Defence, War (1939-45) and Repatriation Services is not included. For these details see § 7, pages 794-6.

Information on the functions of the several departments and the acts administered by the Ministers of Departments was published in Official Year Book No. 37, pages 76-86, but is not repeated in this issue.

(b) *Governor-General.* Section 30 of the Constitution enacts that, until the Commonwealth Parliament otherwise provides, there shall be payable out of the Consolidated Revenue Fund for the salary of the Governor-General an annual sum of ten thousand pounds, and a proviso is made that the salary of the Governor-General shall not be altered during his continuance in office. The expenditure in connexion with the Governor-General and establishment for the years 1938-39 and 1944-45 to 1948-49 was as follows :—

EXPENDITURE : GOVERNOR-GENERAL AND ESTABLISHMENT.

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Salary	10,000	10,000	10,000	10,000	10,000	10,000
Government Houses, maintenance, etc. .. .	12,305	18,584	16,530	23,956	24,748	32,219
Governor-General's office (a) .. .	5,381	16,125	3,340	8,365	5,640	5,122
Interest and Sinking Fund .. .	5,079	4,412	4,667	4,082	4,446	4,956
Total	32,765	49,121	34,537	46,603	44,843	52,297

(a) Represents official services outside the Governor-General's personal interests, and carried out mainly at the instance of the Government.

(c) *Parliament.* Under this head have been grouped all the items of expenditure connected with the Commonwealth parliamentary government of Australia for the years 1938-39 and 1944-45 to 1948-49. Although the administration of the Electoral Act and the conduct of elections come within the functions of the Department of the Interior, the expenditure in connexion therewith is fundamentally incurred on account of the parliamentary government system and for that reason is included herein.

EXPENDITURE : COMMONWEALTH PARLIAMENT.

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Salaries of Ministers	19,235	22,750	22,160	22,749	29,150	29,150
Allowances to Senators	36,171	36,137	36,154	36,200	54,300	54,300
Allowances to Members of House of Representatives	74,900	75,400	75,049	74,928	111,358	112,000
Officers, staff, contingencies, etc. ..	85,799	118,702	136,144	159,358	188,748	215,470
Printing	22,000	24,120	25,025	34,924	28,479	42,417
Travelling expenses of Members ..	41,429	67,000	65,424	66,021	70,973	71,920
Electional Office	85,143	103,396	103,566	106,231	120,774	138,411
Election expenses	3,232	102,770	3,646	154,848	146,660	2,647
Administration of Electional Act ..	20,029	9,223	33,719	38,079	30,539	52,436
Interest and Sinking Fund	41,444	35,900	37,975	33,170	36,144	40,304
Miscellaneous	15,401	8,093	10,864	9,068	11,349	11,838
Total	444,873	603,491	550,326	735,576	828,474	770,893

In Section 66 of the Constitution provision is made for the payment from Consolidated Revenue of an annual sum for the salaries of Ministers, and Section 48 specifies the amount of the allowance to each Senator and each Member of the House of Representatives. These details, together with subsequent increases, will be found on pages 14 and 18 of this volume, while details of the cost of parliamentary government of the Commonwealth and each State will be found on page 107.

(d) *Prime Minister's Department.* External territories were administered by this department until June, 1941, when the Department of External Territories was created. Particulars of expenditure relating to the administration of external territories for the years 1944-45 to 1948-49 are shown under the heading of that department. The expenditure of the Prime Minister's Department for the years 1938-39 and 1944-45 to 1948-49 is shown in the following table:—

EXPENDITURE : PRIME MINISTER'S DEPARTMENT.

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Salaries, contingencies and miscellaneous	160,842	a 100,481	a 127,626	174,647	181,003	221,731
Audit Office	38,434	a 41,716	a 47,008	108,724	147,561	192,050
Rent, repairs, etc.	8,120	13,545	13,872	18,788	22,910	19,041
Public Service Board	50,688	51,899	63,220	94,456	143,435	212,489
High Commissioner's Office, London ..	81,369	a 104,855	a 147,679	263,269	351,490	450,012
Mail Service, Pacific Islands	49,077	(b)	(b)	(b)	(b)	(b)
Scientific and Industrial Research— Council (c)	197,764	776,596	956,081	1,218,747	1,527,080	1,766,945
Contributions, Grants, etc.	75,379	69,912	81,588	112,121	143,233	151,067
Australian National University .. ..	..	..	..	14,000	50,000	202,000
Pensions and Superannuation	10,473	12,887	13,428	14,036	18,790	27,837
North Australia Survey	10,000	..	..	..	..	..
National Oil Pty. Ltd. Agreement	60,000	..	..	..	..	..
Interest and Sinking Fund	613,696	444,145	469,078	410,459	446,863	403,595
Total	1,355,842	1,616,036	1,020,480	2,429,247	3,032,365	3,626,767

(a) Additional expenditure occasioned by the war was provided under War (1939-45) Services.
 (b) Included with Department of External Territories. (c) The Council for Scientific and Industrial Research was abolished, and the Commonwealth Scientific and Industrial Research Organization constituted, by Act assented to 25th March, 1949.

(e) *Department of External Affairs.* The Department of External Affairs was separated from the Prime Minister's Department in 1935-36. Expenditure of the department for the years 1938-39 and 1944-45 to 1948-49 is shown in the following table :—

EXPENDITURE : DEPARTMENT OF EXTERNAL AFFAIRS.
(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Salaries and General Expenses—						
Administrative	20,129	230,555	228,938	224,617	230,028	239,171
Embassies—						
United States of America .. ..	..	68,755	96,628	136,691	142,615	95,649
China .. .. .	..	15,049	39,875	72,993	57,188	47,244
Union of Soviet Socialist Republics ..	..	30,017	24,136	20,153	55,356	49,448
France .. .. .	..	1,427	30,853	40,015	53,692	56,816
Legations—						
Brazil .. .. .	..	56	38,996	26,274	29,138	20,017
Chile .. .. .	..	..	6,073	29,663	18,218	17,227
Netherlands .. .. .	..	..	..	13,818	19,134	24,289
High Commissioners (b)—						
Canada .. .. .	..	20,356	21,275	32,200	35,459	28,971
New Zealand .. .. .	..	7,939	11,005	13,723	15,911	17,625
India .. .. .	..	21,291	23,936	28,457	33,977	34,386
Pakistan .. .. .	..	..	..	..	2,437	10,468
Eire .. .. .	..	..	..	9,011	12,496	15,868
South Africa .. .. .	..	..	805	22,471	18,927	18,857
Consular Representation abroad .. ..	..	..	21,923	143,610	211,299	190,946
Other Representation abroad .. ..	..	..	30,895	46,625	60,122	60,911
International Labour Organization, United Nations Organization and other International agencies—Contributions and Representation at Conferences	43,329	39,999	124,486	413,251	577,240	618,465
Australian National Antarctic Research Expedition .. .. .	..	..	..	20,062	254,755	107,529
Miscellaneous	6,710	8,608	2,714	5,697	3,593	7,031
Total	70,168	244,048	562,538	1,305,271	1,831,585	1,661,418

(a) Additional expenditure occasioned by the war was provided under War (1939-45) Services.
(b) For High Commissioner, United Kingdom, see Prime Minister's Department.

(f) *Department of the Treasury.* The sub-departments under the control of the Commonwealth Treasurer are the Treasury, the Supply and Tender Board, Taxation Office, Superannuation Board, and the Commonwealth Bureau of Census and Statistics. The Government Printing Office is also a sub-department of the Treasury, but its expenditure is charged to Parliament and the Departments concerned. Details of the expenditure of the Treasury for the years 1938-39 and 1944-45 to 1948-49 are given in the following table :—

EXPENDITURE : DEPARTMENT OF THE TREASURY.
(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Treasury (a)	56,528	68,736	114,748	235,035	282,542	239,562
Taxation Office	618,537	1,994,221	2,162,243	2,529,374	3,261,302	3,667,266
Superannuation Board	8,623	12,111	12,415	14,291	19,659	28,273
Census and Statistics	60,939	65,268	74,944	132,717	169,321	227,246
Census	4,113	..	..	244,415	143,604	82,293
Rent, repairs, etc.	23,088	74,116	83,606	90,695	97,487	89,027
Interest and Sinking Fund	911,004	980,750	1,051,420	993,130	1,012,066	1,101,241
Exchange	514,240	500,811	448,217	374,891	341,939	372,060
Loan conversion expenses	1,588	2,102	48,801	3,039	160,801	6,327
Miscellaneous	58,968	216,186	153,513	146,869	258,837	356,957
Total	2,257,628	3,935,301	4,149,907	4,764,456	5,746,658	6,170,252

(a) Includes Supply and Tender Board.
provided under War (1939-45) Services.

(b) Additional expenditure occasioned by the war was

(g) *Attorney-General's Department.* Details of expenditure for the years 1938-39 and 1944-45 to 1948-49 are furnished below :—

EXPENDITURE : ATTORNEY-GENERAL'S DEPARTMENT.

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Attorney-General's Office ..	19,699	42,887	41,709	42,922	44,098	59,687
Crown Solicitor's Office ..	27,642	109,792	129,413	104,317	123,658	133,689
Salaries of Justices of High Court	18,500	17,433	18,879	21,600	28,400	28,500
High Court expenses ..	15,615	16,740	17,162	19,014	21,662	24,157
Court of Conciliation and Arbitration ..	24,046	50,334	52,669	60,070	89,581	117,868
Public Service Arbitrator ..	5,919	4,586	4,242	4,983	9,279	8,839
Rent, repairs, etc. ..	15,131	25,779	26,025	36,277	32,175	36,295
Patents, Trade Marks, etc. ..	71,126	54,016	67,897	97,642	127,862	145,661
Investigation Branch ..	16,219	35,804	35,927	52,125	59,198	66,506
Bankruptcy	44,551	39,223	39,679	41,449	49,200	54,641
Reporting Branch ..	13,922	24,886	24,942	25,058	36,855	45,062
Legal Service Bureau ..	..	..	..	36,867	46,107	(a)
Miscellaneous	9,127	12,166	14,060	26,910	20,497	24,201
Total	281,497	433,646	472,604	569,234	688,572	745,106

(a) Provided under War (1939-45) and Repatriation Services.

(h) *Department of the Interior.* With the formation of the new departments of Works (later expanded to include Housing) in February, 1945, and Immigration in July, 1945, the administration of Commonwealth Public Works and Immigration was transferred to the new departments and costs relating to these activities for the years 1944-45 to 1948-49 are shown elsewhere. The Northern and Australian Capital Territories, which are administered by the Department of the Interior, are for convenience included under Territories, while expenditure in connexion with the Electoral Office, which is administered by the Department of the Interior, is included under Parliament. Commonwealth Railways, whose administration passed to the Department of Shipping and Fuel from the Department of the Interior in March, 1950, are also shown separately—see Railways below.

Particulars of the expenditure for the years 1938-39 and 1944-45 to 1948-49 on other services under the control of this Department are as follows :—

EXPENDITURE : DEPARTMENT OF THE INTERIOR.(a)

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Salaries, Contingencies and Miscellaneous—						
Administrative ..	380,550	6148,300	6187,056	285,073	396,100	531,077
Meteorological Bureau ..	80,107	(c)	(c)	60,578	116,424	194,963
Solar Observatory ..	6,816	15,090	17,804	22,887	32,301	36,028
Forestry Branch ..	10,436	11,803	19,407	28,709	45,008	51,096
Rent, repairs and maintenance	17,618	19,400	27,604	89,302	96,772	119,204
Pensions, Superannuation and Retiring Allowances ..	20,567	18,203	21,074	21,761	29,694	32,232
Interest	690,061	549,994	582,842	484,046	533,337	604,908
Sinking Fund	69,237	92,785	97,424	102,295	107,410	112,781
Total	1,275,392	855,575	953,211	1,094,651	1,357,046	1,682,289

(a) Excludes Territories and Electoral Office. war was provided under War (1939-45) Services. Aviation

(b) Additional expenditure occasioned by the war was provided under War (1939-45) Services. (c) Provided under Departments of Air and Civil

(i) *Department of Works and Housing.* In February, 1945 the Department of Works was formed to take over Commonwealth works from the Department of the Interior. The functions of this department were expanded in July, 1945 to include Housing, which had previously been controlled by the Department of Post-war Reconstruction. Details of expenditure for the years 1944-45 to 1948-49 are shown in the following table :—

EXPENDITURE : DEPARTMENT OF WORKS AND HOUSING.
(£.)

Details.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Administrative—Salaries and general expenses ..	(a) 42,030	(a) 102,000	1,500,217	1,659,389	1,872,538
Pensions, Superannuation and Retiring Allowances	5,180	6,049	8,102	10,841	13,051
Rent, repairs and maintenance ..	1,700	787	92,525	82,139	111,906
Total ..	48,910	108,836	1,600,844	1,752,369	1,997,495

(a) Additional expenditure occasioned by the war was provided under War (1939-45) Services.

(j) *Department of Civil Aviation.* Particulars of expenditure of the Department of Civil Aviation for the years 1938-39 and 1944-45 to 1948-49 are as follows :—

EXPENDITURE : DEPARTMENT OF CIVIL AVIATION.
(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Administrative—Salaries and general expenses ..	89,946	313,222	473,021	808,617	1,202,828	1,839,726
Development and maintenance of Civil Aviation ..	162,232	1,095	110,658	202,132	353,202	604,291
Meteorological Services ..	..	61,000	61,000	149,330	173,100	219,000
Flying Boat Bases ..	55,919	24,285	25,117	38,444	54,845	63,147
Domestic Air Services ..	..	..	..	..	579,596	641,525
International Air Services ..	..	12,457	42,030	10,000	1,396,058	1,470,531
Rent, repairs and maintenance ..	8,428	16,452	16,493	40,531	130,213	178,312
Interest and Sinking Fund ..	11,625	10,020	10,599	9,258	10,088	11,249
Total ..	328,150	438,531	738,908	1,258,312	3,859,020	5,027,811

(k) *Department of Trade and Customs.* Under this head has been included the expenditure of all the sub-departments under the control of the Minister for Trade and Customs, in addition to the amounts payable as bounties and the expenses in connexion therewith. Particulars for the years 1938-39 and 1944-45 to 1948-49 are given in the following table :—

EXPENDITURE : DEPARTMENT OF TRADE AND CUSTOMS.
(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Central Office (a) ..	70,208	b 61,769	b 77,558	234,233	248,384	234,733
Tariff Board ..	13,252	10,854	10,373	13,236	16,092	19,182
Film Copyright ..	4,466	4,778	6,348	5,273	6,309	8,400
Customs Stakes ..	621,125	b 670,549	b 743,657	932,310	1,153,673	1,339,180
Audit (proportion) ..	11,786	17,237	10,920	20,765	18,135	17,784
Pensions and Superannuation	45,063	40,457	40,460	51,571	67,502	70,337
Rent, repairs, &c. ..	7,373	7,885	9,114	32,292	59,357	82,097
Bounties and Subsidies ..	225,036	13,813	22,334	29,320	43,000	39,064
Interest and Sinking Fund ..	34,321	29,917	31,042	27,735	30,198	33,635
Remissions of duty on materials for Commonwealth Government ship construction ..	26,702	1,387	89	..	..	..
Other remissions of duty ..	2,066	5,811	10,079	46,195	47,084	18,786
Miscellaneous ..	1,736	..	3,172	c 55,994	1,081	1,610
Total ..	1,064,124	873,457	983,740	1,440,930	1,691,475	1,865,498

(a) Includes Central Import Licensing Branch, war was provided under War (1939-45) Services. Manufacture Repeal Act 1945.

(b) Additional expenditure occasioned by the
(c) Includes £55,000 compensation under Motor

(1) *Department of Health.* Details of expenditure for the years 1938-39 and 1944-45 to 1948-49 are as follows:—

EXPENDITURE : DEPARTMENT OF HEALTH.

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Administrative	135,506	157,227	160,149	196,369	261,109	152,938
Health Services (a) ..	3,492	11,107	20,319	22,325	42,795	204,889
Quarantine	(b)	(b)	(b)	(b)	(b)	66,462
Interest and Sinking Fund ..	23,661	21,293	22,291	20,132	21,549	23,512
Rent and Repairs	14,102	12,870	16,630	37,007	42,237	54,798
Pensions and Superannuation ..	2,870	4,204	5,006	5,261	7,950	9,746
Subsidy, Cattle Tick Control ..	69,450	53,325	53,325	53,325	53,325	53,325
Medical Research	30,000	20,000	40,000	32,010	50,000	55,000
Nutrition—Publicity and surveys ..	2,969	9,893	6,655	3,274	..	..
World Health Organization ..	..	..	..	..	190	44,700
Child Health Centres	5,000	20,100	23,000	20,000	20,000	20,000
Council for National Fitness ..	371	72,500	72,500	72,500	72,500	72,500
Aerial Medical Services subsidy ..	5,000	7,500	7,500	7,500	7,500	7,500
Miscellaneous	(c) 45,734	2,283	1,413	3,099	1,728	2,124
Total	338,155	392,602	428,788	473,392	580,892	767,554

(a) Includes Pharmaceutical Services, X-ray and Radium Laboratory, Acoustics Laboratory, etc.

(b) Included under Administrative.

£39,430.

(c) Includes reserve of essential drugs and medical equipment,

(14) *Department of Commerce and Agriculture.* Particulars of the expenditure of the Department of Commerce and Agriculture for the years 1938-39 and 1944-45 to 1948-49 are given below:—

EXPENDITURE : DEPARTMENT OF COMMERCE AND AGRICULTURE.(a)

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Administrative	58,218	b 57,689	b 75,420	150,726	222,678	223,130
Administration of Commerce (Trade Descriptions) Act ..	174,876	278,245	279,447	297,483	348,368	400,456
Division of Agricultural Economics ..	..	..	..	18,310	27,501	34,358
Division of Agricultural Production ..	..	..	..	..	30,087	28,925
Overseas Trade publicity	67,016	..	771	12,267	14,439	11,047
Commercial intelligence service abroad ..	47,248	41,300	51,395	110,247	178,381	191,002
Wool publicity and research ..	73,816	74,858	..	..	..	..
Wool use promotion and research ..	..	..	344,538	229,057	540,830	317,152
Fruit bounties	10,402	..	..	..	..	..
Hard testing .. ..	..	..	..	16,827	20,000	20,000
Drought Relief .. ..	..	1,570,601	169,964	720,196	550,036	43
Research, experimental, investigation and development work ..	..	..	1,485	8,485	2,932	9,706
Agricultural machinery control ..	..	..	..	12,024	10,114	4,448
Assistance to Tasmanian Primary Producers .. ..	..	..	..	75,000	..	..
Wheat Industry Stabilization Board ..	..	..	..	28,004	27,384	27,557
Emergency transport of wheat ..	..	..	..	1,500,105	143,278	..
Wheat contract with New Zealand ..	..	..	..	570,902	2,002,337	3,537,426
Dairy Industry Efficiency Grant ..	..	..	..	..	..	141,356
Rent, repairs, maintenance, etc. ..	13,681	2,741	8,540	20,379	12,230	10,266
Pensions and Retiring Allowances ..	12,959	10,877	10,577	9,868	15,674	14,628
Interest	198,599	210,906	248,970	224,716	130,036	148,508
Sinking Fund	245,404	333,809	350,500	57,633	22,470	23,594
All Other	92,410	2,298	3,299	30,391	21,033	9,882
Total	994,095	2,613,324	1,544,870	4,109,939	5,023,917	5,155,044

(a) Excludes Drought Relief and other assistance to Primary Producers.

expenditure occasioned by the war was provided under War (1939-45) Services.

(b) Additional

(c) Includes

representation at New York World Fair, £39,780, and San Francisco Exhibition, £21,335.

(a) *Department of Social Services.* This Department, constituted during 1940-41, administers Age and Invalid Pensions, Maternity Allowances, Child Endowment, Widows' Pensions, and Unemployment and Sickness Benefits. Particulars of administrative expenditure during the years 1938-39 and 1944-45 to 1948-49 are as follows :—

EXPENDITURE : DEPARTMENT OF SOCIAL SERVICES.

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Administrative .. ..	..	11,069	13,788	23,783	44,128	55,325
Child Endowment Section ..	..	140,834	134,130	150,884	173,607	206,241
Age and Invalid Pensions and Maternity Allowances Section	138,634	211,434	236,740	279,504	333,146	425,804
Widows' Pensions Section ..	..	27,016	25,798	27,673	32,201	40,320
Unemployment and Sickness Benefits Section .. ..	..	10,548	189,567	217,012	129,504	182,658
Rehabilitation Branch .. ..	..	..	..	..	..	52,396
Miscellaneous	186,100	42,359	65,904	77,273	88,566	110,057
Total	324,734	443,260	665,927	776,129	801,152	1,072,801

Expenditure from the Consolidated Revenue and National Welfare Funds on Social Services during the years 1938-39 and 1944-45 to 1948-49, including Hospital and Tuberculosis Benefits administered by the Department of Health, is shown in the following table :—

EXPENDITURE ON SOCIAL SERVICES.

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Age and Invalid Pensions ..	15,991,782	21,701,127	26,962,420	29,416,673	36,526,395	41,693,680
Funeral Benefits .. ..	..	163,902	184,478	209,349	209,588	252,979
Widows' Pensions .. ..	..	2,905,146	3,217,334	3,366,288	3,904,086	4,388,468
Maternity Allowances	436,614	2,542,801	2,492,495	3,026,459	2,854,018	2,828,849
Child Endowment .. ..	..	12,036,248	18,019,178	19,862,933	19,425,518	24,323,413
Unemployment and Sickness Benefits .. ..	..	..	1,144,412	1,650,125	1,217,474	1,070,426
Community Rehabilitation .. ..	..	..	..	..	..	33,979
Hospital Benefits .. ..	..	..	1,111,292	4,380,296	4,448,015	5,880,476
Pharmaceutical Benefits .. ..	..	..	..	..	..	149,037
Tuberculosis Benefits .. ..	..	..	..	109,603	27,590	156,049
Total	16,428,396	39,409,614	53,161,609	62,021,726	68,612,684	80,777,356

(o) *Departments of Supply and Development and Shipping and Fuel.* The Department of Supply and Shipping was formed in 1942-43 for the purpose of controlling war-time supplies and shipping. It took over the Marine Branch of the Department of Commerce. The name of the Department was changed in 1947-48 to Department of Shipping and Fuel and in 1948-49 the Department of Supply and Development was created to take over some of the functions of the Department. In the following table details of the expenditure of these departments which was not provided under Defence and War Services is shown for the years 1938-39 and 1944-45 to 1948-49.

EXPENDITURE : DEPARTMENTS OF SUPPLY AND DEVELOPMENT AND SHIPPING AND FUEL.

(£.)

Details.	1939-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Administrative .. ..	..	(a)	(a)	(a)	728,934	476,671
Shipping Branch .. ..	..	(a)	(a)	(a)	2,087,795	1,939,364
Ships' Construction	(a)	(a)	(a)	(a)	(a)	66,795
Marine Branch	208,129	265,737	270,018	320,957	359,582	392,885
Joint Coal Board .. ..	..	(a)	(a)	(a)	866,500	284,135
Stevedoring Industry .. ..	..	..	..	..	260,472	670,128
Transport and Storage Services .. ..	..	(a)	(a)	(a)	(a)	571,783
Mining Industry Assistance .. ..	..	(a)	(a)	(a)	61,413	102,086
Pensions and Retiring Allowances .. ..	..	(a)	(a)	(a)	(a)	3,978
Rent, repairs, maintenance, etc. .. ..	..	6,286	8,447	10,154	79,308	47,209
Miscellaneous	6,703	842	1,335	854 ^b	778,120	49,628
Total	214,832	272,865	279,800	331,965	5,222,124	4,604,662

(a) Provided under Defence and War (1939-45) Services.

(b) Includes Reserves of Stores and Materials, £764,098.

Early in 1950 the Departments of Supply and Development and Shipping and Fuel were abolished, and the three Departments of Fuel, Shipping and Transport, Supply, and National Development were established. The first took over the functions of the former Departments of Shipping and Fuel and of Transport (also abolished), the second the Supply sections of the former Department of Supply and Development, and the third certain administrative functions of the developmental side of that Department and of the former Department of Post-war Reconstruction (also abolished).

(p) *Department of External Territories.* This Department was set up in June, 1941 to administer the Commonwealth External Territories of Papua, New Guinea, Norfolk Island and Nauru. Expenditure of the Department for the years 1944-45 to 1948-49 is shown hereunder. Particulars of expenditure on Territories are given in para. (x) following :—

EXPENDITURE : DEPARTMENT OF EXTERNAL TERRITORIES.

(£.)

Details.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Administration — Salaries and general expenses	23,374	32,165	42,338	53,952	73,776
Shipping and mail services to the Pacific Islands	12,000	11,954	12,367	130	..
Superannuation .. ..	..	152	183	249	248
Rent, repair and maintenance of buildings .. ..	..	943	909	909	866
Total	35,374	45,214	55,797	55,240	74,890

(q) *Department of Immigration.* This Department was formed in July, 1945 to administer immigration, naturalization, etc. Prior to the formation of the Department, this work was carried out by a section of the Department of the Interior. Expenditure for the years 1944-45 to 1948-49 is shown in the following table :—

EXPENDITURE : DEPARTMENT OF IMMIGRATION.

(£.)

Details.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Administration — Salaries and general expenses	32,420	61,120	128,268	207,126	396,212
British migration .. ..	..	..	32,772	902,202	1,338,334
Displaced persons from Europe .. ..	..	..	..	163,710	1,334,953
Other Encouraged Migration .. ..	..	..	93	61,464	126,112
Reception, etc. Depots .. ..	..	..	..	41,444	238,491
Miscellaneous .. ..	..	11,431	15,491	28,327	150,400
Superannuation .. ..	..	..	17	447	689
Rent, repair and maintenance of buildings .. ..	..	..	6,578	6,287	3,747
Total	32,420	72,551	183,219	1,411,007	3,588,938

(r) *Department of Labour and National Service.* This Department was set up during the 1939-45 War for the purpose of mobilizing the nation's man-power and to deal with matters affecting industrial relations, welfare and training, and war housing. The Department's post-war functions relate to industrial matters, vocational training (other than University type) of discharged members of the Forces, the operation of the Commonwealth Employment Service, etc.

Prior to 1946-47, expenditure on this Department was included under Defence, War (1939-45) and Repatriation Services. Expenditure for the years 1946-47 to 1948-49 is shown in the following table :—

EXPENDITURE : DEPARTMENT OF LABOUR AND NATIONAL SERVICE.

(£.)

Details.	1946-47.	1947-48.	1948-49.
Administrative	1,031,651	1,178,557	1,242,624
Superannuation	37	507	684
Rent, repair and maintenance of buildings	95,742	97,676	84,882
Total	1,127,430	1,276,740	1,328,190

(s) *Department of Transport.* This Department was set up in 1941-42 to control, regulate and direct all land transport services for the carriage of goods and passengers, within the Commonwealth. Its post-war functions (until March, 1950) included the administration of the Standardization of Railways Agreement, Commonwealth and Federal Aid Roads, the Australian Transport Advisory Council, etc. The Department was abolished in March, 1950, and its functions, together with the administration of the Commonwealth Railways, were transferred to the Department of Fuel, Shipping and

Transport. Prior to 1946-47 expenditure by this Department was provided under Defence, War (1939-45) and Repatriation Services. Expenditure for the years 1946-47 to 1948-49 is shown in the following table :—

EXPENDITURE : DEPARTMENT OF TRANSPORT.

(£.)

Details.	1946-47.	1947-48.	1948-49.
Administrative—Salaries and general expenses ..	54,618	66,615	160,895
Rent, repair and maintenance of buildings ..	2,804	3,170	2,834
Total	57,422	69,785	163,729

(t) *Department of Information.* This Department was set up during the 1939-45 War, its functions relating, *inter alia*, to the direction and control of the publication of information on the war, and to publicity censorship. Its post-war function is the dissemination of national publicity. In March, 1950 it was abolished as a separate Department, and transferred to the Department of the Interior as the Australian News and Information Bureau. Expenditure of the Department prior to 1946-47 was provided under Defence, War (1939-45) and Repatriation Services. Expenditure for the years 1946-47 to 1948-49 is shown in the following table :—

EXPENDITURE : DEPARTMENT OF INFORMATION.

(£.)

Details.	1946-47.	1947-48.	1948-49.
Administrative—			
Salaries and general expenses	330,448	227,594	237,054
Miscellaneous .. .. .	..	96,815	109,576
Rent, repair and maintenance of buildings ..	11,832	22,386	10,762
Total	342,280	346,795	357,392

(u) *Department of Post-war Reconstruction.* The Department of Post-war Reconstruction was set up during the 1939-45 War to prepare for the conversion from war to peace-time activities. It administered the Commonwealth Reconstruction Training Scheme and the Office of Education. In March, 1950 the Department was abolished, and its functions were distributed to other Departments, including the newly-formed Department of National Development. Expenditure prior to 1946-47 was included under Defence, War (1939-45) and Repatriation Services. Expenditure for the years 1946-47 to 1948-49 is shown in the following table :—

EXPENDITURE : DEPARTMENT OF POST-WAR RECONSTRUCTION.

(£.)

Details.	1946-47.	1947-48.	1948-49.
Administrative—Salaries and general expenses ..	216,301	248,502	268,699
Office of Education	105,539	155,920	193,444
Financial Assistance to University students ..	204,488	230,068	219,359
Miscellaneous .. .. .	..	90,000	43,591
Rent, repair and maintenance of buildings ..	33,388	31,679	30,502
Total	559,716	756,169	755,595

(v) *Postmaster-General's Department.* Details of the expenditure of this department for the five years 1938-39 and 1944-45 to 1948-49 are given in the following table :—

EXPENDITURE : POSTMASTER-GENERAL'S DEPARTMENT.
(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Salaries, stores and materials, mail engineering services, etc.	11,563,510	19,920,531	20,841,144	22,617,000	27,854,862	36,422,673
Public Works Staff—Salaries, etc.	60,000	60,000	60,000	68,000	68,000	94,000
Audit (proportion)	11,660	13,000	13,000	13,000	13,000	13,000
Pensions and Retiring Allowances	75,113	38,291	34,512	30,329	27,989	26,986
Superannuation	316,747	379,522	397,615	428,445	575,103	613,885
Rents, repairs, etc.	114,183	156,035	180,440	223,310	335,978	461,329
A.R.P. Works at Postal Establishments .. ..	..	51,048	17,777	..	..	..
Interest	1,398,690	1,295,668	1,110,915	1,072,607	981,404	924,164
Sinking Fund	1,128,933	1,604,792	1,684,980	1,700,210	1,857,680	1,950,552
Exchange	359,397	474,576	434,615	428,827	396,143	377,437
Loans, Redemption and Conversion expenses .. ..	..	..	..	104,973	57,985	..
Total	15,028,233	23,993,463	24,774,998	26,755,701	32,171,144	40,884,026

Further details of expenditure to 1947-48 on account of the Postmaster-General's Department appear in Chapter V. "Transport and Communication" (part I., Posts, Telegraphs, Telephones and Wireless).

(w) *Railways.* The Commonwealth Railways, previously administered by the Department of the Interior, were transferred in March, 1950, to the newly-formed Department of Fuel, Shipping and Transport. The expenditure on railways for the years 1938-39 and 1944-45 to 1948-49 is shown below :—

EXPENDITURE : COMMONWEALTH RAILWAYS.
(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Working expenses—						
Trans-Australian	493,463	882,464	776,386	740,556	900,212	1,055,111
North Australia	55,186	517,273	212,150	52,222	55,489	55,485
Central Australia	214,374	784,221	591,790	439,252	485,517	656,935
Aust. Capital Territory	7,365	12,438	12,158	13,195	15,013	17,666
Interest	392,194	359,907	344,171	341,189	320,116	312,581
Sinking Fund	75,230	100,474	105,295	110,575	116,095	121,889
Exchange	62,674	83,894	83,697	80,516	70,456	67,289
Contribution to South Australia (Port Augusta—Port Pirie Railway)	20,000	20,000	20,000	20,000	20,000	20,000
Superannuation	13,467	17,426	17,215	19,381	27,777	27,165
Freight concessions—North Australia and Central Australia Railways .. ..	..	..	..	..	..	203,841
Miscellaneous	17,088	16,699	26,400	104,286	77,936	56,358
Total	1,351,041	2,794,796	2,189,262	1,921,172	2,088,611	2,594,320

(a) Includes loans, redemption and conversion expenses, 1946-47 £54,648, 1947-48, £20,274 and 1948-49, £903.

Additional details of the financial operations of the Commonwealth Railways to 1947-48 are given in Chapter V. "Transport and Communication" (part B. Railways).

(2) *Territories.* The following table shows the expenditure on account of territorial services for the years 1938-39 and 1944-45 to 1948-49. The internal territories are administered by the Department of the Interior, and the Department of External Territories controls the external territories. The expenditure has been grouped in one table for convenience. Information in greater detail will be found in the *Finance Bulletin* No. 40, issued by this Bureau.

EXPENDITURE : TERRITORIES.

(£.)

Details.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Internal—						
Australian Capital(a)	637,228	736,898	831,289	941,275	1,045,181	1,240,131
Northern (a) ..	402,899	294,800	365,990	819,613	861,180	1,105,154
External—						
Papua ..	48,830	4,609	} 6,654	1,526,342	2,278,043	3,418,351
New Guinea ..	5,532	2,139				
Norfolk Island ..	5,471	4,074				
Norfolk Island ..	5,471	4,074	4,074	4,075	4,076	4,540
Total ..	1,099,960	1,042,520	1,208,007	3,291,305	4,188,480	5,768,176

(a) Excludes Railways, see para. (iv).

(iii) *Capital Works and Services.* The expenditure on capital works and services during the years 1938-39 and 1944-45 to 1948-49 was as follows :—1938-39, £6,565,268 (excluding £3,494,733 provided from excess receipts for Defence equipment); 1944-45, £5,705,351; 1945-46, £6,659,952; 1946-47, £17,180,202; 1947-48, £25,501,587; and 1948-49, £42,639,224. Particulars exclude expenditure in connexion with Defence Services prior to 1946-47 and War (1939-45) and Repatriation Services.

(iv) *Defence, War and Repatriation Services.* Full details concerning the expenditure from Consolidated Revenue upon War (1914-18) and Repatriation Services, and Defence, War (1939-45) and Repatriation Services will be found in §§ 6 and 7, pages 793-6.

Division IV.—Payments to or for the States.

1. *General.*—An outline of the provisions of the Constitution requiring the Commonwealth to make payments to the States, and of the systems which followed, is given in earlier issues of the Official Year Book (see No. 37, pages 633 to 638). In the following paragraphs reference is made to the agreements at present in operation.

2. *Financial Agreement.*—Details of the Financial Agreement between the Commonwealth and the States are given in Official Year Book No. 37, pages 685 to 690. Under this agreement the Commonwealth agreed to contribute £7,584,912 per annum towards interest payable on the State Debts for a period of 58 years from 1st July, 1927. This amount is to be distributed amongst the States as follows :—New South Wales, £2,917,411; Victoria, £2,127,159; Queensland, £1,096,235; South Australia, £703,816; Western Australia, £473,432; Tasmania, £266,859; Total, £7,584,912.

These amounts are equal to the sums paid by the Commonwealth to each State in the year 1926-27 at the rate of 25s. per head of population, the rate at which the Commonwealth had contributed annually to the States since 1st July, 1910 as compensation for the States relinquishing, after Federation, the right to levy Customs and Excise Duties.

In addition, the Commonwealth agreed to pay to the National Debt Sinking Fund for redemption of State Debts the following amounts:—(a) an annual contribution of 2s. 6d. per cent. of the net public debt of the States at 30th June, 1927 for a period of 58 years from 1st July, 1927 (in respect of New South Wales net public debt from 1st July, 1928); (b) an annual contribution of 5s. per cent. on new borrowings (except those for redemption, conversion or funding a State deficit) after 1st July, 1927 for a period of 53 years from the date of raising; (c) an annual contribution of 5s. per cent. on loans raised to meet revenue deficits occurring between 1st July, 1927 and 30th June, 1935 for a period of 39 years from 1st July, 1944.

3. **Special Grants.**—The Constitution provides in Section 96 for the granting of special financial assistance to the States. Western Australia has received financial assistance each year since 1910-11. In 1912 a grant was made to Tasmania, the amount payable in the first year, 1912-13, being £95,000, which was to be progressively reduced by £10,000 in each successive year. The Tasmania Grant Act 1913 provided for an addition to this grant, bringing the amount payable to £85,000 per annum to the year 1921-22, after which annual grants of varying magnitude were made. South Australia received £360,000 in 1929-30 and further grants in each successive year.

In 1933 the Commonwealth Government appointed the Commonwealth Grants Commission of three members to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto.

Applications have been received from South Australia, Western Australia and Tasmania during each year from 1933 and the recommendations of the Commission in respect of the years 1938-39 and 1945-46 to 1949-50 were as follows:—

COMMONWEALTH GRANTS COMMISSION: GRANTS RECOMMENDED.

(£.)

State.	1938-39.	1945-46. (a)	1946-47. (b)	1947-48. (b)	1948-49. (b)	1949-50. (c)
South Australia ..	1,040,000	1,400,000	2,000,000	2,318,000	2,850,000	4,174,000
Western Australia ..	570,000	950,000	1,873,000	2,977,000	3,600,000	5,618,000
Tasmania ..	410,000	646,000	875,000	747,000	1,000,000	1,262,000
Total ..	2,020,000	2,996,000	4,748,000	6,042,000	7,450,000	11,054,000

(a) Excludes Special Grants recommended under Section 6 (2) of the States Grants (Income Tax Reimbursement) Act 1942: 1945-46, South Australia, £1,101,365, Western Australia, £912,559 and Tasmania, £118,096, total £2,132,020.

(b) Includes additional grants recommended: 1946-47, South Australia, £400,000, Western Australia, £628,000 and Tasmania, £50,000, total, £1,078,000; 1947-48, Western Australia, £1,000,000; 1948-49, South Australia, £600,000, Tasmania, £100,000, total £700,000.

(c) Includes the excess of the assessed grant over the special grant received for 1947-48: South Australia, £324,000, Western Australia £768,000, Tasmania £262,000, total £1,354,000.

4. **States Grants (Tax Reimbursement) Acts.**—Details of the States Grants (Income Tax Reimbursement) Act 1942 and the States Grants (Entertainments Tax Reimbursement) Act 1942 are given in earlier issues of the Official Year Book (see No. 37, pages 635 to 637). These acts provided for grants to the States as compensation for vacating the fields of Income Tax and Entertainments Tax. Grants under these acts ceased after 1945-46 and were replaced by grants under the States Grants (Tax Reimbursement) Act

1946-1948. This Act provided for the following reimbursement grants to be paid to the States, the figures shown relating to 1946-47 and 1947-48 respectively :—New South Wales, £16,477,000, £18,536,625; Victoria, £8,860,000, £9,967,500; Queensland, £6,601,000, £7,426,125; South Australia, £3,458,000, £3,890,250; Western Australia, £3,384,000, £3,807,000; Tasmania, £1,220,000, £1,372,500; Total, £40,000,000, £45,000,000.

For 1948-49 and subsequent years an amount is to be determined by increasing the aggregate grants paid in 1947-48 (£45,000,000) by the same proportion as the aggregate population of the six States at the beginning of the financial year increases over the aggregate population of the six States at 1st July, 1947. This amount is to be further increased by a percentage equal to the percentage increase in average wages per person employed in the financial year preceding the year in which the reimbursement grants are to be paid over the average wages per person employed in 1945-46. The amount so determined will be the aggregate of the reimbursement grants and is to be distributed to the States in the following proportions :—

- (i) 1948-49 to 1956-57—(a) The following percentages of the grant shall be distributed in the proportion indicated by the distribution of the aggregate reimbursement grant in 1946-47 and 1947-48 viz. :—1948-49, 90 per cent; 1949-50, 80 per cent; and thus decreasing by 10 per cent. each year to 10 per cent. in 1956-57, and (b) the remainder in the proportion indicated by the "adjusted" population for each State.
- (ii) 1957-58 and subsequent years—the proportion indicated by the "adjusted" population* for each State.

It is provided that, if the application of the foregoing formula for distribution of the aggregate grants causes the amount of the reimbursement grant for any State to fall below the grant for 1946-47, the grant payable will be the same as that for 1946-47 and the balance of the aggregate grant is to be distributed between the remaining States in the proportions above.

An amount equal to arrears of State income taxes collected by the States in any year is to be deducted from the reimbursement grants for that year. The aggregate amount so deducted less any refunds of State income taxes made by the Commonwealth is to be repaid in the event of uniform taxation ceasing to operate. This amount bore interest at 3 per cent. up to 30th June, 1946, but thereafter, under the new arrangement, will bear no interest.

The payment of the tax re-imbursement grant in any year to any State is subject to the condition that that State does not impose a tax on incomes in that year.

5. *Grants for Road Construction.*—(i) *Main Roads Development Act 1923-25.* Grants amounting in the aggregate to £1,750,000 were made to the States in 1922-23, 1924-25 and 1925-26 for the purpose of reconditioning certain main roads. Of this amount £1,500,000 was granted on the condition that the States spent an equivalent amount.

(ii) *Federal Aid Roads.* The Federal Aid Roads Act 1926 made provision for the construction and re-construction of roads in the several States out of moneys provided by the Commonwealth and States respectively. The original agreement provided for a grant by the Commonwealth of £2,000,000 per annum for ten years from 1st July, 1926. The allocation to the States was in the same proportions as the allocation of grants under the Main Roads Development Act 1923-1925 and was based on three-fifths according to population and two-fifths according to area.

Expenditure was made in the proportion of 15s. by the States to £1 by the Commonwealth. In 1931 the original agreement was varied in certain respects, the most important of which operated from 1st July, 1931, when, in lieu of the £2,000,000 per

* In the "adjusted" population allowances are made for differences in the proportion of school children in the population and the density of the population in each state.

annum, the Commonwealth agreed to contribute an amount equivalent to 2½d. per gallon customs duty, and 1½d. per gallon excise duty on petrol entered for home consumption during each year, and the States were not required to make any contribution as formerly agreed upon.

The 1926 agreement, which was originally intended to remain in operation for ten years, was continued until 30th June, 1937, when a new agreement was entered into. The latter provided for the continuation of the Federal Aid Roads Agreement for a further period of ten years from 1st July, 1937, increased the amount payable to the States to 3d. a gallon customs duty and 2d. a gallon excise duty on petroleum and shale products (except benzol, on which the excise was only 1½d.), and stipulated that the proceeds of the extra ½d. per gallon should be expended on the construction, reconstruction, maintenance or repair of roads, or other works connected with transport. The allocation of the amount payable was in the proportion of 5 per cent. to Tasmania and the remaining 95 per cent. to the other States on the basis of three-fifths according to the population at 30th June, 1936, and two-fifths according to area. At the request of the Commonwealth Government the States were, up to a limit of one-twelfth of this additional amount, to attend to the maintenance or repair of roads of approach to or adjoining Commonwealth properties. A further variation was the reduction from 3 to 2½ per cent. of the sinking fund contribution of the States on loan moneys provided by them between 1926 and 1931.

(iii) *Commonwealth Aid Roads and Works.* The Federal Aid Roads and Works Agreement expired on 30th June, 1947, and was replaced by the Commonwealth Aid Roads and Works Act 1947, which provided for the following grants to be made to the States for the three years commencing on 1st July, 1947:—

- (a) An amount equal to 3d. a gallon customs duty and 2d. a gallon excise duty on petroleum and shale products (except benzol, on which the proportion of excise duty is 1½d. a gallon) entered for home consumption. Petroleum and shale products used in civil aircraft are to be excluded.
- (b) £1,000,000 in each year.

These grants are to be distributed to the States in the following proportion:—

- (1) 5 per cent. to Tasmania,
- (2) 95 per cent. to be distributed between the remaining States as to three-fifths according to population at 30th June, 1947, and two-fifths according to area.

The amount of the grant received by the States under (a) above is to be expended on the construction, reconstruction, maintenance and repair of roads and (not exceeding one-sixth) on other works connected with transport. The grant under (b) above is to be expended on construction and maintenance of roads in sparsely populated areas, timber country and rural areas or on purchase of road-making plant for use in those areas.

The Act also provides £500,000 per annum to be expended by the Commonwealth on strategic roads and roads of access to Commonwealth property and £100,000 for the promotion of road safety practices.

Amendments to the Act in 1948 and 1949 increased the grant under (b) above to £2,000,000 in 1948-49 and £3,000,000 in 1949-50.

In 1948-49 an additional £100,000 was paid to the Commonwealth Aid Roads and Works Trust Account from the Department of Transport's vote for expenditure on the promotion of road safety practices.

6. *Amounts Paid.*—(i) 1901 to 1949. The following table shows particulars of the amounts paid to each of the States since Federation, divided into three periods, with separate details for Special and Roads Grants. Special Commonwealth grants for the relief of primary producers are not included in this table. Details of these grants will be found in Chapter XX. "Agricultural Production".

**PAYMENTS BY THE COMMONWEALTH TO OR FOR THE STATES TO
30th JUNE, 1949.(a)**
(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
1900-01 to 1909-10 (b) ..	27,606	19,815	8,895	6,148	8,727	2,602	73,793
1910-11 to 1926-27 (c) ..	41,634	31,341	15,184	9,925	6,809	4,367	109,350
1927-28 to 1948-49 (d) ..	76,594	52,954	28,308	19,245	13,826	6,777	197,704
Special Grants (e) ..	..	..	..	25,763	22,924	12,811	61,498
Grants—							
Income Tax Reimbursement (f) ..	55,419	24,331	22,212	9,037	9,492	3,409	123,900
Income Tax Reimbursement—Special Grants (f)	..	..	..	1,654	913	119	2,686
Entertainments Tax Reimbursement (g) ..	603	1,399	..	364	368	138	2,872
Tax Reimbursement (h) ..	56,309	30,680	22,735	11,941	11,625	4,250	137,540
Price Control Reimbursement (i) ..	218	145	95	67	44	28	597
Non-recurring Grants from Excess Receipts, 1934-35 to 1936-37 ..	1,188	827	433	265	201	86	3,000
Special Assistance (j) ..	949	918	375	220	322	128	2,912
Grants for Road Construction, 1922-23 to 1948-49 (k)	19,869	12,563	13,519	7,960	13,656	3,556	71,123
Total	280,389	174,973	111,756	92,589	88,997	38,271	786,975

(a) Includes non-recurring grants from excess receipts, but excludes amounts provided for relief of wheat-growers and other primary producers and other payments for medical research, etc. (b) Under Section 87 of the Commonwealth Constitution. (c) Under the several Surplus Revenue Acts. (d) Under Financial Agreement Act 1928-1944. (e) Under various States Grants Acts. (f) Under States Grants (Income Tax Reimbursement) Act 1942. (g) Under States Grants (Entertainments Tax Reimbursement) Act 1942. (h) Under States Grants (Tax Reimbursement) Act, 1946-1948. (i) Under State Grants (Administration of Controls Reimbursement) Act 1948. (j) Unemployment Relief, Metalliferous Mining, Forestry, Local Public Works, etc. (k) Under Main Roads Development, Federal Aid Roads, Federal Aid Roads and Works and Commonwealth Aid Roads and Works Acts.

(ii) 1948-49. For the year ended 30th June, 1949, the payments made to or for each State are shown below:—

PAYMENTS BY THE COMMONWEALTH TO OR FOR THE STATES, 1948-49.(a)
(£.)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
Interest on States' Debts ..	2,917,411	2,127,159	1,096,235	703,816	473,432	266,859	7,584,912
Sinking Fund on States' Debts (b) ..	746,251	361,430	247,340	227,244	204,685	64,933	1,851,883
Special Grants ..	..	..	..	2,850,000	3,600,000	1,000,000	7,450,000
Tax Reimbursement Grants ..	21,878,947	12,027,220	8,812,744	4,622,447	4,481,684	1,664,750	53,487,792
Price Control Reimbursement ..	218,000	145,000	95,037	66,984	44,388	28,000	597,409
Commonwealth Aid Roads and Works (c) ..	2,002,562	1,235,624	1,363,446	781,142	1,363,446	355,066	7,101,286
Contributions towards Interest on Loans for Drought Relief ..	920	395	— 12	..	309	..	1,612
Total	27,764,091	15,896,828	11,614,790	9,251,633	10,167,944	3,379,608	78,074,894

(a) Excludes relief to primary producers and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Paid to Trust Fund.

Minus sign (—) indicates an excess of refunds.

For particulars of the amounts paid to the several States during the years 1939-40 to 1948-49 see *Finance Bulletin* No. 40 published by this Bureau.

§ 3. Commonwealth Trust Funds.

The following table shows the opening and closing balances and receipts and expenditure of some of the more important Trust Funds of the Commonwealth for the year ended 30th June, 1949.

COMMONWEALTH TRUST FUNDS : RECEIPTS, EXPENDITURE AND BALANCES, 1948-49.

(£'000.)

Fund.	Balance at 30th June, 1948.	Year ended 30th June, 1949.		Balance at 30th June, 1949.
		Receipts.	Expenditure.	
Australian New Guinea Production ..	335	2,624	2,167	792
Coinage	3,498	2,274	2,269	3,503
Commonwealth Aid Roads and Works..	801	7,731	7,470	1,062
Defence Forces Retirement Benefits ..	..	1,562	108	1,454
Diverted Cargoes	1,059	I	75	985
Enemy Subjects	1,170	74	227	1,017
Import Procurement Suspense ..	4,720	(a) 2,789	2,747	4,762
Insurance Deposits	2,339	374	116	2,597
International Post-war Relief and Rehabilitation	2,697	3,147	4,569	1,275
Lend-Lease Settlement	2,418	108	571	1,955
Liquid Fuel Equalization	1,739	168	1,050	857
Marine War Risks Insurance	4,676	a —4,500	5	171
National Debt Sinking	4,181	29,536	15,295	18,422
National Welfare	69,928	110,730	80,778	99,880
Public Trustee and Custodian	1,506	445	22	1,029
Superannuation	16,520	3,501	2,332	17,689
War Damage	8,793	a —5,041	2,603	1,149
War Gratuity .. .. .	..	33,249	3,198	30,051
War Service Homes	1,620	8,643	8,763	1,500
War Service Homes—Insurance	440	40	16	464
Wheat Industry Stabilization	768	I	393	376
Wheat Prices Stabilization	11,408	18,318	11,549	18,177
Wine Industry Assistance	500	..	..	500
Wool Contributory Charge	3,609	1,029	1,620	3,018
Wool Industry	7,320	306	50	7,576
Wool Research	564	317	186	695
Other	43,869	ab161,868	182,399	23,338
Total	196,478	379,294	330,578	245,194

(a) Includes surplus balances transferred to Consolidated Revenue Fund—Import Procurement Suspense Trust Account, £4,000,000; Marine War Risks Insurance Fund, £4,500,000; War Damage Fund, £5,500,000; Other Funds, £3,000,000; Total, £17,000,000. These items have been treated as reductions of receipts. (b) Includes surplus balances transferred to Loan Fund, £18,733,000 treated as reductions of receipts.

§ 4. Commonwealth Loan Funds.

Brief historical notes relating to the Commonwealth Loan Fund are given in earlier issues of the Official Year Book (*see* No. 37, page 640). In the following table details are given of the net expenditure from the Commonwealth Loan Fund for the years 1938-39 and 1945-46 to 1948-49 and the aggregate expenditure to 30th June, 1949. The figures given represent "net" loan expenditure, i.e., after adjustments have been made on account of amounts expended in earlier years

COMMONWEALTH NET EXPENDITURE FROM LOAN FUND.

(£.)

Particulars.	1938-39.	1945-46.	1946-47.	1947-48.	1948-49.	Total to 30th June, 1949.
War (1914-18) and Repatriation Services	..	..	..	..	..	372,989,867
Defence, War (1939-45) and Repatriation Services .. .. .	..	152,947,643	37,893,997	..	-18,733,000 (a)	1,559,429,778
Capital Works and Services—						
Defence	1,912,284	..	..	..	..	(b) 8,693,948
Civil Aviation, Buildings and Works	..	..	..	..	..	213,086
Ships, Yards and Docks	-305,351	..	..	-164,943	-3,624	7,694,461
Lighthouses, Works and Services ..	-1,000	..	..	..	..	634,490
River Murray Waters Act .. ..	..	..	..	..	..	2,105,625
Postmaster-General's Department—						
Telegraph and Telephone Construction .. .. .	..	..	..	..	..	36,057,558
Buildings, Works, Sites, etc. ..	-1,290	-2	-14	-1,349	-1,023	4,077,024
Subscription to Capital of Amalgamated Wireless Ltd. .. ..	..	..	..	..	..	300,000
Radio Stations and Equipment ..	..	..	..	..	..	104,538
Serum and Health Laboratories ..	..	..	..	..	..	80,149
Other Health Buildings and Services	..	..	..	..	..	21,864
Repatriation Buildings, etc. .. ..	..	..	..	..	..	47,026
War Service Homes (c) .. .. .	..	..	..	..	..	7,329,523
Railways	-339	-7,251	-1,714	-4,519	-1,026	13,760,231
Territories (d)	-6,768	-8,364	-12,376	-8,644	-6,105	8,768,514
Immigration .. .. .	..	..	..	..	..	1,680,834
Assistance to States—						
Unemployment Relief	-3,822	..	..	..	..	2,567,020
Mining .. .. .	..	..	..	..	..	283,750
Forestry .. .. .	..	..	..	..	..	322,000
Farmers' Debt Adjustment	2,000,000	..	..	..	..	7,967,000
Roads .. .. .	..	..	..	..	..	249,686
Wire and Wire Netting .. .. .	..	..	..	..	..	608,849
Drought Relief .. .. .	..	..	..	..	..	1,814,205
Housing .. .. .	..	6,795,000	11,015,000	13,305,000	14,492,000	45,607,000
Wheat Bounty .. .. .	..	..	..	..	..	3,429,571
Other .. .. .	..	..	..	..	..	1,381,094
Total Capital Works and Services	3,593,714	6,779,383	11,000,896	13,125,545	14,480,222	155,929,046
GRAND TOTAL	3,593,714	159,727,026	48,894,893	13,125,545	-4,252,778	2,088,348,691

(a) Repayment of surplus balances of Defence Trust Accounts. (b) Excludes amounts charged to War Loan Fund. (c) In addition, £13,045,408 was expended from War Loan Fund prior to 1923-24. (d) Includes Administration and other Public Buildings, Australian Capital Territory.

NOTE.—Minus sign (—) indicates excess of repayments to Loan Fund.

Information relating to the Public Debt of the Commonwealth is given in Part D. Commonwealth and State Public Debt (*see* page 816).

§ 5. Commonwealth Expenditure on Capital Works and Services.

In the following table details are given of Commonwealth expenditure on capital works and services during each of the years 1944-45 to 1948-49 and the aggregate to 30th June, 1949. The table covers all expenditure on capital works and services made from the Consolidated Revenue Fund, the Loan Fund and Trust Funds.

COMMONWEALTH EXPENDITURE ON CAPITAL WORKS AND SERVICES FROM REVENUE, TRUST AND LOAN FUNDS.

(£'000.)

Particulars.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.	1901-2 to 1948-49 Total.(a)
Defence and War—						
Navy	1,941	769	2,759	302	768	37,871
Army	4,330	2,350	616	191	249	68,168
Air Force	7,377	1,012	188	185	323	49,109
Munitions and other	4,850	1,604	1,276	2,310	4,205	96,708
Civil Aviation	1,455	697	2,382	3,541	2,607	14,898
Ships—Construction and purchase	2,600	2,839	1,904	1,083	294	26,905
Docks, yards and equipment	1,852	752	364	309	198	13,433
Lighthouses .. .. .	..	5	35	16	22	1,713
River Murray Waters Act—Works .. .. .	..	..	..	..	..	2,997
Health	4	7	5	12	16	995
Immigration .. .. .	..	..	3	18	2,744	4,440
Council for Scientific and Industrial Research	3	1	..	106	81	323
Coal Industry Act 1946 .. .. .	..	..	..	..	1,650	1,050
War Service Homes	93	352	2,114	5,908	8,396	38,062
Christmas Island Phosphate Co.—Acquisition of assets .. .. .	..	..	..	..	1,724	1,724
Postmaster-General's Department	3,395	4,235	5,908	8,218	12,503	115,059
Railways—						
Commonwealth	97	87	136	298	224	15,144
Other .. .. .	..	..	47	22	13	2,529
Locomotives and rolling-stock	984	153	1	..	..	2,333
Territories—						
Australian Capital Territory	237	349	779	1,076	1,844	16,087
Northern Territory	84	70	558	407	619	4,199
Papua-New Guinea .. .. .	..	..	..	..	162	340
Norfolk Island .. .. .	..	..	..	..	..	2
Subscriptions to Capital—						
Commonwealth Oil Refineries .. .. .	..	..	..	..	..	425
Amalgamated Wireless (Australasia) Ltd. .. .. .	..	..	..	..	156	656
Qantas Empire Airways .. .. .	..	..	415	2,455	900	3,770
Commonwealth Engineering Co. .. .. .	..	..	100	..	..	100
British Commonwealth Pacific Airlines .. .. .	..	..	..	500	500	1,000
Advances—						
Australian National Airlines .. .. .	..	370	1,800	1,500	700	4,370
Aluminium Production Commission	5	12	27	30	126	200
Overseas Telecommunications Commission .. .. .	..	..	1,425	..	..	1,425
Beaufort Homes .. .. .	..	..	91	300	..	391
Glen Davis Shale Oil Project .. .. .	..	..	..	..	186	186
All other works, buildings, etc.	288	470	1,065	1,638	2,152	12,557
Total	29,685	16,134	24,088	30,425	43,392	539,775

(a) Includes properties transferred from the States.

§ 6. Cost of War (1914-18) and Repatriation.

The general policy of the Commonwealth Government has been to pay from Consolidated Revenue all charges for interest, sinking fund, pensions and other recurring charges consequent upon the 1914-18 War, and part of the expense of repatriation. On the other hand, the whole direct cost of the War and the larger proportion of the cost of repatriation were paid from loans. Detailed particulars relating to Repatriation, War and Service Pensions appear in Chapter XXVII.—“Repatriation” of this issue. The total cost from both sources to 30th June, 1949, is set out in the following table :—

COMMONWEALTH 1914-18 WAR EXPENDITURE.
(£'000.)

Period.	From Consolidated Revenue Fund.			War Loan Expenditure. (b)
	War and Repatriation Services, including War Pensions.	Interest and Sinking Fund. (a)	Total.	
1914-15 to 1918-19 ..	15,541	30,694	46,235	219,213
1919-20 „ 1923-24 ..	50,370	94,597	144,877	77,374
1924-25 „ 1928-29 ..	43,334	93,147	136,481	—52
1929-30 „ 1933-34 ..	44,871	66,832	111,703	—5
1934-35 „ 1938-39 ..	45,238	47,834	93,072	..
1939-40 „ 1943-44 ..	47,375	47,007	94,382	..
1944-45	10,276	9,013	19,289	..
1945-46	10,038	8,854	18,892	..
1946-47	10,320	8,939	19,259	..
1947-48	10,743	8,931	19,674	..
1948-49	12,772	8,875	21,647	..
Discounts and Flotation Expenses on Loans, including Redemption and Conversion Loans	(c)	..	..	5,990
Indebtedness to the Government of the United Kingdom for payments made, services rendered, and goods supplied during the War .. ..	..	..	..	(d) 43,398
War Gratuities paid in cash ..	452	..	452	27,063
Total to 30th June, 1949	301,330	(e) 424,633	725,963	372,990

(a) Excludes interest on amounts raised for the States for Soldier Land Settlement. (b) Excludes expenditure on War Service Homes from 1923-24. (See page 791.) (c) Included above. (d) The total indebtedness to the Government of the United Kingdom involved in the Funding Arrangements Act 1921 was £92,480,000, the balance, £49,082,000, for cash supplied, being included above. At 30th June, 1949, the amount outstanding had been reduced to £79,724,000. Repayment of this debt and payment of interest were suspended in 1931, by arrangement with the United Kingdom Government. (e) Interest, £352,604,000; Sinking Fund, £72,029,000.

NOTE.—For particulars of expenditure relating to the 1939-45 War, see § 7, pages 794-5.

§ 7. Cost of Defence, War (1939-45) and Repatriation Services.

Details of the expenditure on Defence, War and Repatriation Services by the Departments of Defence, Navy, Army, Air, Munitions and Aircraft Production, Supply and Shipping, and Home Security are shown in the following table. Expenditure on other war and repatriation services by other departments, including Labour and National Service, Post-war Reconstruction, etc., is included under the heading of Other War and Repatriation Services.

The figures represent the combined expenditures from revenue, trust and loan funds for the years 1939-40 to 1948-49.

EXPENDITURE FROM REVENUE, TRUST AND LOAN FUNDS : DEFENCE, WAR (1939-45) AND REPATRIATION SERVICES. (£'000.)

Details.	1939-40 to 1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Defence—						
Administrative and general expenses	1,106	166	148	132	217	231
Buildings, works, etc.	290	9	7	8	15	11
Audit, Pensions, Interest, Sinking Fund, etc.	21	4	4	5	1	1
Total	1,417	179	159	145	233	243
Navy—						
Permanent Naval Forces—salaries and general expenses	35,701	12,666	13,231	6,504	5,344	5,807
General Services and Expenses—H.M.A. Ships and Depots	27,359	9,698	10,250	4,095	4,216	4,620
Civilian Services, Naval Establishments, etc.—Salaries and general expenses	9,952	3,585	3,002	2,919	2,621	2,386
Auxiliary vessels for naval defence purposes	4,151	334	679	1,906	608	965
Transport services	22,282	5,488	4,880	2,141	1,363	561
Naval construction and additions to the fleet	18,529	2,226	1,443	1,020	3,403	2,676
Graving Dock—towards cost of construction	7,036	1,849	742	350	302	..
Miscellaneous war expenditure	1,664	264	172	330	90	46
Buildings, works, etc.	6,558	1,943	789	2,760	302	872
Aircraft and aero engines	..	..	..	..	..	2,308
Maintenance and rent	221	121	124	124	125	182
Audit, Pensions, Interest, Sinking Fund, etc.	710	140	150	142	158	182
Total	134,163	38,314	35,502	22,291	18,532	20,695
Army—						
Australian Military Forces—pay, allowances, training and maintenance	442,409	130,555	155,054	36,428	19,794	10,245
General services	27,434	7,862	5,073	2,295	1,311	1,299
Civilian services, Inspection Branch, etc.—Salaries and general expenses	12,167	2,830	1,602	1,401	1,731	1,864
Internees and Prisoners of War—maintenance (a)	1,076	222	87	257	62	30
Arms, armament, ammunition, etc.	283,772	27,813	13,172	24,420	4,978	984
Buildings, works, etc. (b)	47,098	4,406	2,386	655	193	249
Audit, Pensions, Interest, Sinking Fund, etc.	1,776	291	318	328	394	651
Total	815,732	173,979	177,692	65,784	28,463	15,322

(a) Includes War Criminals.

(b) Includes National Defence Contributions Trust Account.

EXPENDITURE FROM REVENUE, TRUST AND LOAN FUNDS: DEFENCE,
WAR (1939-45) AND REPATRIATION SERVICES—continued.

(£'000.)

Details.	1939-40 to 1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Air—						
Royal Australian Air Force—pay and allowances	113,932	46,580	52,716	7,414	7,985	5,945
Civilian, Meteorological and general services	38,130	19,749	15,749	(a) 4,799	(a) 3,802	(a) 3,845
Aircraft, equipment and stores	140,687	46,214	24,488	10,406	6,435	6,652
Buildings, works, etc.	31,628	7,377	1,011	188	184	323
Audit, Pensions, Interest, Sinking Fund, etc.	434	97	104	133	135	142
Total	336,811	120,026	94,068	22,940	18,541	16,907
Munitions and Aircraft Production(b)—						
Administrative—salaries and general expenses	8,517	3,171	2,291	1,458	1,081	1,293
Munitions Factories—salaries and general expenses (c)	443	173	606	1,787	1,008	885
Munitions Factories—working capital	3,010	..	..	92	300	..
Defence Research and Industrial Laboratories—salaries and general expenses	758	334	308	283	355	377
Transport and Storage Services .. ..	..	..	..	..	609	383
Machinery, plant, etc., for manufacture of munitions and aircraft	40,638	2,040	1,304	883	994	482
Reserves of raw materials (d) 4,127	(d) 4,127	(d) ..	(d) ..	(d) ..	(d) ..	(d) ..
Technical Training	2,185	114	7	..	..	..
Electric supply in Australia—development	141	78	102	3	75	..
Shipbuilding—plant, etc.	1,434	4	10	15	7	(e)
Standard Ships—construction	4,746	2,690	2,839	1,904	1,248	(e)
Locomotives and Rolling Stock—Construction	1,196	984	153	1	..	..
Defence Research and Development Buildings, works, etc.	30,904	1,402	93	350	1,413	4,554
Miscellaneous expenditure	4,375	831	475	372	422	317
Audit, Pensions, Interest, Sinking Fund, etc.	425	86	93	110	377	336
Total	102,899	11,907	8,281	7,258	8,004	8,762
Supply and Shipping—						
Administrative—salaries and general expenses	3,904	1,239	1,264	1,172	341	(f)
Flax Production—Mills, general expenses, etc.	1,651	185	44	6	..	(f)
Reserves of stores, materials, etc.	5,276	1,943	1,137	..	..	(f)
Oil Storage—Construction	1,263	363	37	21	..	(f)
Power Alcohol Distilleries—Construction and production	1,397	471	63	..	..	(f)
Shipping Branch	3,430	2,261	3,739	3,774	(e)	(e)
Buildings, works, etc.	232	76	74	27	..	(f)
Miscellaneous expenditure	3,772	2,042	746	928	37	(f)
Audit, Pensions, Interest, and Sinking Fund, etc.	9	5	8	16	20	(f)
Total	20,934	8,575	7,112	5,944	398	(f)

(a) Excludes Meteorological Services, now provided under Department of the Interior.
 (b) Department of Supply and Development from 1947-48. (c) Part only—balance provided from Trust Fund (Working Capital). Includes maintenance and rehabilitation of munitions factories not in production. (d) Included under Department of the Army from 1942-43. (e) Provided under Ordinary Services. (f) Part provided under Department of Supply and Development (Munitions), balance provided under Ordinary Services.

EXPENDITURE FROM REVENUE, TRUST AND LOAN FUNDS: DEFENCE, WAR (1939-45) AND REPATRIATION SERVICES—*continued*.

(£'000.)

Details.	1939-40 to 1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Home Security	2,988	70	47	(a)	(a)	(a)
Other War and Repatriation Services—						
Public Debt Charges	50,369	34,289	41,663	46,195	48,423	48,940
War and Service Pensions ..	2,606	2,771	4,915	6,762	7,604	9,024
Peace Officers	2,005	629	342	174	187	220
U.N.R.R.A. and International Post-war Relief and Rehabilitation ..	..	47	5,811	18,117	2,240	2,770
Price Stabilization Subsidies ..	7,012	10,809	12,984	22,641	35,031	14,788
Division of Import Procurement ..	(b) 6,224	410	272	(c)	(c)	(c)
Rationing Commission	883	510	351	491	478	180
Prices Commission	665	491	560	762	996	280
Assistance to primary production ..	15,440	14,280	19,755	7,719	10,868	8,248
Department of Labour and National Service	3,047	1,527	1,319	(c)	(c)	(c)
Department of Post-war Reconstruction—						
Administrative—salaries and general expenses	314	418	524	336	421	421
Financial assistance, University Students	172	207	184	(c)	(c)	(c)
Commonwealth Reconstruction Training Scheme	42	510	3,146	9,674	13,125	10,500
War Service Land Settlement ..	..	..	1,495	2,001	2,242	2,922
Re-establishment Loans for Agricultural purposes .. ..	..	..	..	2,610	2,503	1,572
Miscellaneous	28	21	111	66	138	129
Department of Repatriation	643	1,101	3,651	7,915	7,679	6,212
Department of Information	(d) 787	(d) 298	(d) 287	(c)	(c)	(c)
Other Departments	16,199	6,749	6,398	2,257	997	766
Other Administrations (Recoverable Expenditure) (e)	19,642	2,897	3,664	5,496	11,247	2,529
United Kingdom Grant .. .. .	..	..	..	25,000	..	10,000
International Monetary Agreements ..	..	..	..	..	10,193	..
Total	126,078	77,964	107,432	158,216	131,818	114,443
War Gratuity .. .. .	..	..	143	2,882	3,360	31,884
Reciprocal Lend-Lease to the United States Forces	169,383	89,133	26,010	5,006	521	..
Lend-Lease Settlement .. .. .	..	..	..	8,398	1,095	108
Miscellaneous Credits	-55,358	-56,855	-62,176	-25,520	-12,713	-5,418
Credits from the Disposals Commission ..	..	-2,602	-15,635	-37,986	-15,049	-6,454
Total, Defence, War (1939-45) and Repatriation Services—						
Consolidated Revenue Fund	527,120	194,574	225,651	197,456	182,601	196,492
Trust Fund (f)	6,647	76	36	8	2	..
Loan Fund	1,121,280	266,040	152,948	37,894	..	..
GRAND TOTAL	1,655,047	460,690	378,635	235,358	182,603	196,492

(a) Provided under Department of the Interior, payment to credit of Import Procurement Suspense Services.

(b) Includes £4,001,000 Working Capital for Trust Account.

(c) Provided under Ordinary

(d) Includes Publicity Campaignship.

(e) Munitions, Stores, etc., supplied to Governments of the United Kingdom and other Administrations.

(f) Includes expenditure from excess receipts of previous years appropriated for Defence Equipment Trust Account and from National Defence Contributions Trust Account.

§ 8. Commonwealth Public Service Superannuation Fund.

Details of this Fund are given in earlier issues of the Official Year Book (*see* No. 37, page 656).

The number of contributors to the fund at 30th June, 1947, was 46,191 (40,120 males and 6,071 females) and the average pension for which contributions were being made was—males, 6.839 units or £222 5s. 4d. per annum; females, 4.368 units or £141 19s. 2d. per annum.

The income for the year 1946-47 was £1,664,421 of which officers' contributions represented £1,124,258 and interest on investments, etc. (including accrued interest), £532,174. The expenditure for the year was £621,212, of which £296,574 represented pension payments and £253,818, refunds of contributions. At 30th June, 1947, the total funds invested amounted to £15,166,933 (at cost). The average rate of interest on investments at 30th June, 1947 was £3 15s. 5d. per cent.

Pensions in force on 30th June, 1947, including contributory and non-contributory but excluding commuted pensions, numbered 10,046, with a net annual liability of £1,254,711, of which £936,113 represented the share payable from the Consolidated Revenue Fund.

B. STATE FINANCE.

§ 1. General.

1. **Functions of State Governments.**—In comparing the financial returns of the States, allowances must be made for the various functions discharged by the respective Governments, and for local conditions in each case. Direct comparisons of the revenue, expenditure and debt of the individual States are difficult, owing to the fact that functions which in one State are assumed by the Central Government are in another relegated to municipal or semi-governmental bodies which are vested with certain defined borrowing powers and whose financial transactions are not included with those of the Central Government. Care, therefore, is needed in making comparisons, and the particulars contained in this Chapter should be read with those contained in Chapter XV, "Local Government". In many respects, moreover, the budgets of the Australian Governments differ materially from those of most European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned in rendering public services, such as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

2. **Accounts of State Governments.**—The various financial transactions of the States are in each case mainly concerned with one or other of three Funds:—the "Consolidated Revenue Fund", the "Trust Fund", and the "Loan Fund". All revenue (except certain items paid into special funds) collected by the State is paid into its Consolidated Revenue Fund, from which payments are made under the authority of an Annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a Special Act.

Figures in § 2 following relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the Business Undertakings included in the Annual Budget Papers. These latter are as follows:—Railways, Tramways and Omnibuses, and Sydney Harbour Trust Section of the Maritime Services Board. Deductions have been made from the Budget figures, however, in order to obviate duplications caused by inter-fund payments and to maintain uniformity from year to year in the presentation of statistics. Particulars for all other States relate to the transactions of the Consolidated Revenue Fund.

In Tasmania the separation of the Transport Commission's financial transactions from the Consolidated Revenue Fund from 1st July, 1939 has occasioned considerable decreases in the figures since 1939-40 as compared with those for the previous years.

The Trust Fund comprises all moneys held in trust by the Government, and includes such items as sinking funds, insurance companies' deposits, etc.

The Loan Fund is debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.

3. *Inter-relation of Commonwealth and State Finances.*—A statement in some detail, covering the inter-relation of Commonwealth and State finances during the period from the inception of Federation to the passing of the Financial Agreement Act 1928, was published in Official Year Book, No. 22, pages 379-80. Changes in the financial relations between the Commonwealth and States since the passing of the Financial Agreement Act have been described in issues of the Official Year Book from year to year (*see also* pages 785-790 and 816-8).

§ 2. State Consolidated Revenue Funds.

Division I.—Revenue.

1. *General.*—The principal sources of State revenue are :—

(a) Taxation; (b) the Business Undertakings controlled by the State Governments; (c) Sale of and Rental from Crown lands; (d) Payments by Commonwealth Government under the Financial Agreement, Special Grants and Tax Reimbursement Acts, etc.; (e) Interest on advances; and (f) Miscellaneous sources, comprising Fines, Fees, etc.

Of these sources, that yielding the largest revenue for the States as a whole is the group of Business Undertakings, the principal contributors being the Government Railways and Tramways. Next in magnitude are Commonwealth payments under the Tax Reimbursement Acts, followed in order by Taxation, the Commonwealth payments under the Financial Agreement and Special Grants, and Lands receipts. Since the introduction in 1942-43 of the Uniform Tax Scheme, Commonwealth payments under the Income and Entertainments Tax Reimbursement Acts and, from 1946-47, under the Tax Reimbursement Act, have replaced revenue previously received from Income and Entertainments taxes.

2. *Revenue Received.*—The following table shows particulars of the total amounts and the amounts per head of consolidated revenue received by the several States during the years 1938-39 and 1944-45 to 1948-49.

STATE CONSOLIDATED REVENUE.

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Total
TOTAL COLLECTIONS.							
(£'000.)							
1938-39 ..	51,099	26,985	19,330	12,304	10,950	3,615	124,283
1944-45 ..	73,666	35,273	26,447	16,113	13,954	3,657	169,110
1945-46 ..	71,229	35,191	24,774	16,343	14,408	3,933	165,878
1946-47 ..	72,781	37,359	25,033	17,193	14,981	4,507	171,854
1947-48 ..	86,082	41,728	26,820	18,843	17,711	4,816	196,000
1948-49 ..	96,082	46,842	32,979	21,845	20,561	5,740	224,049

PER HEAD OF POPULATION.(b)

		£ s. d.													
1938-39 ..	18 13 7	14 8 3	19 3 6	20 13 6	23 9 0	15 4 2	17 19 5								
1944-45 ..	25 7 9	17 13 1	24 15 0	25 17 2	28 15 9	14 16 2	23 1 10								
1945-46 ..	24 5 9	17 9 3	22 17 0	25 18 1	29 8 1	15 14 3	22 8 2								
1946-47 ..	24 11 3	18 6 5	22 16 3	26 17 0	30 2 10	17 14 1	22 18 9								
1947-48 ..	28 12 8	20 3 4	24 2 1	28 17 9	34 16 1	18 7 11	25 15 0								
1948-49 ..	31 7 2	22 3 4	29 1 4	32 16 10	39 7 6	21 8 0	28 16 11								

(a) *See* § 1 par. 2, page 797.

(b) Based on mean population of each financial year.

3. Sources of Revenue.—(i) *General.* Classifying the revenue of the several States in the manner indicated in par. 1 above, particulars for the year 1948-49 are as follows :—

STATE CONSOLIDATED REVENUE : SOURCES, 1948-49.

Source of Revenue.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Total
TOTAL REVENUE. (£.)							
Taxation (b) ..	10,453,683	6,869,510	4,041,934	2,877,668	1,394,767	1,650,147	27,287,718
Business Under- takings ..	49,973,590	20,457,341	14,909,368	8,389,079	7,727,827	5,739	101,462,947
Lands ..	2,886,952	959,164	1,673,031	257,784	553,076	145,671	6,475,678
Interest (n.e.l.) ..	560,849	1,954,758	782,255	909,921	689,479	584,026	5,481,288
Commonwealth Pay- ments— Commonwealth Tax Reimburse- ments ..	21,878,947	12,027,220	8,812,744	4,622,447	4,481,684	1,664,750	53,487,792
Other(c) ..	3,135,411	2,272,159	1,191,272	3,597,800	4,117,820	1,266,859	15,581,321
Miscellaneous ..	7,192,480	2,301,717	1,568,474	1,190,259	1,595,993	423,032	14,271,955
Total ..	96,081,912	46,841,881	32,979,078	21,844,958	20,560,646	5,740,224	224,048,699

PER HEAD OF POPULATION.(d)
(£ s. d.)

Taxation (b) ..	3 8 3	3 5 1	3 11 3	4 6 6	2 13 5	6 3 0	3 10 3
Business Under- takings ..	16 6 2	9 13 8	13 2 10	12 12 3	14 16 0	0 0 5	13 1 3
Lands ..	0 18 10	0 9 1	1 9 6	0 7 9	1 1 2	0 10 10	0 16 8
Interest (n.e.l.) ..	0 3 8	0 18 6	0 13 9	1 7 5	1 6 5	2 3 7	0 14 1
Commonwealth Pay- ments— Commonwealth Tax Reimburse- ments ..	7 2 10	5 13 9	7 15 4	6 19 0	8 11 8	6 4 2	6 17 9
Other (c) ..	1 0 6	1 1 6	1 1 0	5 8 2	7 17 9	4 14 6	2 0 2
Miscellaneous ..	2 6 11	1 1 9	1 7 8	1 15 9	3 1 1	1 11 6	1 16 9
Total ..	31 7 2	22 3 4	29 1 4	32 16 10	39 7 6	21 8 0	28 16 11

(a) See § 1 par. 2, page 797.

(b) In all States certain taxation collections are not paid into Consolidated Revenue Fund. For total collections see next page.

(c) Includes payments under Financial Agreement, Special Grants and Prices Control Reimbursement Grants.

(d) Based on mean population of the financial year.

In comparing the revenue of the States, it should be borne in mind that business undertakings which in one State may be controlled by the Government are, in another State, controlled by a board or trust. For example, in New South Wales and Western Australia the tramway systems are controlled by the Government, while in the other States ownership is largely vested in trusts. Harbour and river services and water supply and sewerage are also controlled in some cases by the State and in others by trusts. All the Tasmanian transport facilities are controlled by a commission.

(ii) *Revenue from Taxation.* (a) *General.* The following table shows, for the year 1948-49, particulars of all State taxation collections irrespective of whether such moneys have been paid into the Consolidated Revenue Funds or not. For this reason the particulars hereunder differ from those given in the tables relating to the Consolidated Revenue Funds and represent a comprehensive statement of all taxation collections by the Government in each State. In this and the succeeding statements of taxation the collections have been grouped according to the nature of the tax rather than the method of collection. For example, stamp duties on betting tickets and bookmakers' licences have been included under "Entertainments Tax" instead of under "Stamp Duties"

Prior to Federation, duties of Customs and Excise constituted the principal source of revenue from taxation. Thereafter, until the introduction of the Uniform Income Tax Scheme the most productive State taxes were the various Income Taxes, which, in 1941-42, included Unemployment Relief, State Development and Hospital Taxes.

The total amounts and the amounts per head raised from all sources of taxation by the several State Governments, including amounts not paid into the Consolidated Revenue Fund and tax reimbursements received from the Commonwealth, during the years 1938-39 and 1944-45 to 1948-49, are shown in the following table :—

STATE REVENUE FROM TAXATION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
TOTAL COLLECTIONS. (£'000.)							
1938-39 ..	20,263	12,023	8,646	4,199	3,597	1,779	50,507
1944-45(a)	23,444	12,779	8,928	4,430	3,899	2,063	55,543
1945-46(a)	24,809	13,331	9,484	4,613	4,046	2,298	58,581
1946-47(a)	27,107	16,713	10,640	5,729	4,925	2,776	67,890
1947-48(a)	31,305	18,246	12,020	6,321	5,726	3,102	76,720
1948-49(a)	36,290	21,490	14,186	7,661	6,581	3,670	89,878

PER HEAD OF POPULATION.(b)

	(£ s. d.)																	
1938-39	7	8	2	6	8	5	8	11	6	7	14	1	7	9	8	7	6	1
1944-45(a)	8	1	7	6	7	11	8	7	1	7	2	2	8	0	11	8	7	11
1945-46(a)	8	9	2	6	12	4	8	15	0	7	6	3	8	5	2	9	3	7
1946-47(a)	9	3	0	8	3	11	9	13	11	8	18	11	9	18	2	10	18	1
1947-48(a)	10	8	3	8	16	4	10	16	1	9	13	10	11	5	1	11	17	0
1948-49(a)	11	16	11	10	3	5	12	10	0	11	10	4	12	12	1	13	13	7

(a) Includes Commonwealth Tax Reimbursements.
financial year.

(b) Based on mean population of each

(b) *Probate and Succession Duties.* Probate duties have been levied for many years in all the States, but the provisions of the Acts governing the payment of duty differ widely both in regard to the ordinary rates and those which apply to special beneficiaries. A table showing the values of the estates in which probates and letters of administration were granted is given in Chapter XVI. "Private Finance".

The duties collected for the years 1938-39 and 1944-45 to 1948-49 are as follows :—

STATE PROBATE AND SUCCESSION DUTIES : NET COLLECTIONS.

(£.)

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	2,364,124	2,779,573	3,317,401	3,689,983	4,610,742	4,871,876
Victoria ..	1,374,355	1,853,991	1,825,180	2,460,655	2,095,866	2,573,166
Queensland ..	677,937	701,235	890,782	943,332	1,072,386	1,262,401
South Australia ..	366,526	521,179	557,290	553,420	583,543	772,360
Western Australia ..	123,798	275,477	262,280	261,339	307,511	359,386
Tasmania ..	94,669	136,308	212,125	158,891	165,702	251,631
Total ..	5,000,509	6,267,763	7,065,058	8,067,620	8,835,750	10,090,820

(c) *Other Stamp Duties.* The revenue derived from stamp duties (excluding probate and succession duties and stamp duties on betting tickets) for the years 1938-39 and 1944-45 to 1948-49 is shown in the accompanying table :—

OTHER STATE STAMP DUTIES : NET COLLECTIONS.

(£.)

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	1,286,124	1,337,285	1,653,851	2,135,637	2,462,483	2,809,202
Victoria ..	959,727	886,718	1,070,841	1,335,406	1,482,628	1,655,893
Queensland ..	610,110	586,834	737,691	948,271	1,087,688	1,268,352
South Australia ..	249,729	236,179	287,941	350,234	390,662	436,422
Western Australia ..	274,995	228,755	292,766	387,998	432,797	500,745
Tasmania ..	84,832	72,760	95,712	121,002	137,300	158,135
Total ..	3,465,517	3,348,531	4,138,802	5,278,548	5,993,558	6,828,749

(d) *Land Tax.* All the States impose a land tax, Queensland, the last State to fall into line, collecting its first levy in 1915-16. In New South Wales the State land tax is levied on the unincorporated portion of the Western Division of the State only.

The following table shows the amounts collected by means of such taxes during the years 1938-39 and 1944-45 to 1948-49 :—

STATE LAND TAX : NET COLLECTIONS.

(£.)

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	2,154	2,283	2,326	2,180	1,966	2,243
Victoria ..	482,336	357,603	321,299	382,599	373,766	370,547
Queensland ..	401,682	383,220	375,404	375,303	372,383	374,450
South Australia ..	321,482	289,738	288,676	286,481	284,503	284,694
Western Australia ..	114,623	118,134	111,353	111,920	110,657	131,783
Tasmania ..	85,069	91,493	90,789	91,759	92,342	93,802
Total ..	1,407,346	1,242,471	1,189,847	1,250,242	1,235,617	1,257,519

(e) *Income Taxes.* State taxes levied on incomes prior to the introduction of the Uniform Tax Scheme in 1942-43 were as follows :—

New South Wales—Income Tax, Super Tax and Further Tax on Undistributed Income of Companies ;

Victoria—Income Tax, Special Income Tax, and Unemployment Relief Tax ;

Queensland—Income Tax, Super Tax, Additional Tax and Income (State Development) Tax ;

South Australia—Income Tax ;

Western Australia—Income Tax, Hospital Tax and Gold Mining Profits Tax ;

Tasmania—Income Tax.

Some details of these taxes are given in earlier issues of the Year Book.

When the Uniform Tax Scheme was introduced in 1942-43 these taxes, together with the Commonwealth War Tax, were discontinued, and the Commonwealth Income Tax rates were increased to raise the revenue previously raised by these taxes. The States are reimbursed by the Commonwealth for the revenue lost to them by the discontinuance of these taxes. Details of these reimbursement grants are given on page 789.

In the following table total State collections of the taxes mentioned above are shown for the year 1938-39. For the years 1944-45 to 1948-49 the total of Commonwealth Reimbursements and arrears of State taxes collected are shown.

STATE INCOME AND DIVIDEND TAXES : NET COLLECTIONS.

(£.)

State.	1938-39.	1944-45. (a)	1945-46. (a)	1946-47. (b)	1947-48. (b)	1948-49. (b)
New South Wales ..	12,703,150	15,356,000	15,356,000	16,472,691	18,540,934	22,021,712
Victoria ..	6,250,508	6,517,000	6,517,000	8,860,000	9,967,499	12,098,479
Queensland ..	5,608,603	5,821,000	5,821,000	6,601,000	7,426,125	8,832,622
South Australia ..	2,102,928	2,361,000	2,361,000	3,458,000	3,890,250	4,630,081
Western Australia ..	2,338,616	2,546,000	2,546,000	3,384,000	3,807,000	4,494,632
Tasmania ..	787,396	886,953	895,754	1,218,778	1,372,533	1,667,021
Total ..	29,791,201	33,487,953	33,496,754	39,994,469	45,004,341	53,744,547

(a) Includes revenue received under the States Grants (Income Tax Reimbursement) Act 1942.

(b) Includes revenue received under States Grants (Tax Reimbursement) Act 1946.

(f) *Motor Taxation.* Motor taxation comprises tax and registration fees on motor vehicles, and licences of motor dealers, motor drivers and motor cycle riders, and public vehicles except when controlled by local government authorities. The following table shows the collections for the years 1938-39 and 1944-45 to 1948-49 :—

STATE MOTOR TAXATION : NET COLLECTIONS.

(£.)

State.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	2,762,678	2,370,442	2,618,341	2,937,588	3,469,003	3,957,563
Victoria ..	1,913,689	1,655,159	1,846,937	2,093,747	2,388,718	2,647,318
Queensland ..	939,757	834,153	960,698	1,068,979	1,242,086	1,498,003
South Australia ..	715,944	601,896	650,946	737,371	795,283	1,107,860
Western Australia ..	453,953	358,672	393,068	429,009	691,242	689,960
Tasmania ..	175,591	225,986	247,805	280,690	312,704	355,024
Total ..	6,960,712	6,046,308	6,717,795	7,547,384	8,899,036	10,255,728

Except in the case of South Australia, the proceeds of motor tax and motor registration fees are paid into special funds and the amounts do not appear in the Consolidated Revenue Funds.

(iii) *Business Undertakings.* (a) 1948-49. A very large proportion of State gross revenues is made up of receipts from business undertakings under the control of the Governments. The principal of these are railways and tramways, harbour works, water supply and sewerage and electricity supply, and, in addition, State batteries for the treatment of auriferous ores are included for Western Australia, and various minor revenue-producing services are rendered by the Governments of all States. For the year 1948-49 the revenue from these sources was £101,462,947 or 45.3 per cent. of the revenue from all sources. Details of revenue are as follows :—

STATE REVENUE FROM BUSINESS UNDERTAKINGS, 1948-49.

(£.)

Source.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a).	Total.
Railways	b39,663,461	c17,283,058	d4,908,984	5,821,484	5,161,218	..	82,838,205
Tramways and Omnibuses	8,740,972	(d)150,270	..	..	591,466	..	9,482,708
Harbours, Rivers, Lights	1,569,157	(e)306,126	..	930,651	450,740	..	3,256,674
Water Supply, Sewerage, Irrigation and Drainage .. ..	..	1,298,623	..	1,476,322	1,175,292	..	3,950,237
Electricity Supply .. ..	..	815,096	..	..	60,800	5,739	890,635
Other .. ..	..	604,171	384	160,622	279,311	..	1,044,488
Total	49,973,590	20,457,344	14,909,368	8,389,079	7,727,827	5,739	101,462,947

(a) Tasmanian transport services are under the separate control of the Transport Commission.
 (b) Excludes £800,000 contribution from Consolidated Revenue Fund in respect of losses on country developmental railways.
 (c) Includes electric tramways operated by the Railways Department.
 (d) Tramway contribution to Consolidated Revenue.
 (e) Includes Harbour Trust Fund contribution, £205,032.

(b) 1938-39 and 1944-45 to 1948-49. Particulars of the revenue from business undertakings are given below :—

STATE REVENUE FROM BUSINESS UNDERTAKINGS.(a)

(£'000.)

Source.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Railways, Tramways and Omnibuses ..	48,154	77,071	73,441	70,142	82,264	92,321
Harbour Services ..	2,357	2,647	2,574	2,623	2,912	3,257
Water Supply, Sewerage, Irrigation and Drainage	2,543	3,176	3,072	3,360	3,560	3,950
Other	2,014	2,454	2,281	1,593	1,702	1,935
Total	55,068	85,348	81,368	77,718	90,438	101,463

(a) See notes to previous table.

(iv) *Lands.* The revenue from the sale and rental of Crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. The following table shows the revenue from sales and rentals of Crown lands for the year 1948-49 :—

STATE LAND REVENUE, 1948-49.

(£.)

Source.	N.S.W.	Victoria.	Q'land.	S.Aust.	W.Aust.	Tas.	Total.
Sales ..	159,374	83,931	..	28,248	21,224	2,265	295,042
Conditional Purchases	503,292	..	..	7,047	194,136	6,632	711,107
Rentals ..	1,868,466	182,144	1,184,514	222,489	140,793	44,657	3,643,063
Forestry ..	326,236	640,272	402,872	..	182,019	89,110	1,640,509
Other ..	29,584	52,817	85,645	..	14,904	3,007	185,957
Total ..	2,886,952	959,164	1,673,031	257,784	553,076	145,671	6,475,678

(v) *Commonwealth Payments.* Commonwealth Payments to the States represent a considerable proportion of the States' Revenue. In 1948-49 the total amount (excluding sundry minor items) paid to the Consolidated Revenue Funds of the States was £69,069,113 (30.8 per cent.). This was made up of the contribution towards interest on States' debts under the Financial Agreement, £7,584,912, special grants to the States of South Australia, Western Australia and Tasmania, £7,450,000, Prices Control Reimbursement, £546,409, and Tax Reimbursement Grants £53,487,792. The latter item has been included under State taxation above as it is paid to the States as a reimbursement for vacating the field of income taxation.

In addition to these, the States receive a number of other payments which are paid to Trust Funds. The main items in this class are the contribution towards the sinking fund on States' debts (£1,851,883 in 1948-49) paid to the National Debt Sinking Fund and grants for Commonwealth Aid Roads and Works (£7,101,286 in 1948-49) paid to State Trust Funds.

More detailed information concerning Commonwealth payments to the States is given under part A of this Chapter, (§ 2, Division IV., page 785).

(vi) *Interest and Miscellaneous.* In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc. In 1948-49 interest, mainly from loans to local governing bodies and on public account balances, supplied £5,481,288 whilst "Miscellaneous" revenue which includes fines of the courts and fees for services amounted to £14,271,955.

Division II.—Expenditure.

1. *General.*—The principal heads of State expenditure from Consolidated Revenue Funds are :—

(a) Interest, sinking fund and exchange charges in connexion with public debt; (b) Working expenses of railways, tramways and other business and industrial undertakings; (c) Education; (d) Health and charitable expenditure; (e) Justice; (f) Police; (g) Penal establishments; and (h) all other expenditure, under which heading is included Public Works, Lands and Surveys, Agriculture and Forestry, Legislative and General Administration. Pensions and Miscellaneous.

In earlier years the working expenses of Railways and Tramways were the most important item of State Governmental expenditure, but, for a period prior to 1911-12, Public Debt charges were the heaviest item. Since then, however, Railways and Tramways expenditure has again taken the major place. In the year 1948-49 the working expenses of the Railways and Tramways and Omnibuses were 38.8 per cent. of the total expenditure from the State Consolidated Revenue Funds; next in importance were Public Debt Charges, 18.5 per cent.; Education, 12.3 per cent.; Charitable, Public Health and Hospitals, 9.8 per cent.; and Law, Order and Public Safety, 5.0 per cent.

2. **Total Expenditure.**—The total expenditure from the Consolidated Revenue Funds of the several States and the expenditure per head of population during each of the years 1938-39 and 1944-45 to 1948-49 are shown in the following table :—

STATE EXPENDITURE : CONSOLIDATED REVENUE FUNDS.

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Total.
TOTAL EXPENDITURE. (£'000.)							
1938-39 ..	53,558	27,773	19,316	12,701	11,170	3,641	128,159
1944-45 ..	72,698	34,924	25,878	16,113	13,949	3,676	167,238
1945-46 ..	70,858	35,185	24,760	16,343	14,408	4,034	165,588
1946-47 ..	74,631	37,354	25,017	17,253	15,029	4,573	173,857
1947-48 ..	86,204	42,282	26,914	19,156	18,062	5,102	197,720
1948-49 ..	95,918	48,225	32,929	22,130	21,378	5,845	226,425

PER HEAD OF POPULATION.(b)
(£ s. d.)

1938-39 ..	19 11 7	14 16 8	19 3 3	21 6 10	23 18 5	15 6 5	18 10 8
1944-45 ..	25 1 1	17 9 7	24 4 4	25 17 2	28 15 7	14 17 8	22 16 9
1945-46 ..	24 3 3	17 9 2	22 16 9	25 18 1	29 8 1	16 2 4	22 7 5
1946-47 ..	25 3 9	18 6 4	22 16 0	26 18 10	30 4 9	17 19 3	23 4 1
1947-48 ..	28 13 6	20 8 8	24 3 9	29 7 4	35 9 11	19 9 9	25 19 6
1948-49 ..	31 6 1	22 16 5	29 0 5	33 5 5	40 18 9	21 15 9	29 3 0

(a) See § 1, par. 2, page 797.

(b) Based on mean population of each financial year.

3. **Details of Expenditure.**—(i) 1948-49. The following table shows the total expenditure and expenditure per head for each of the principal items :—

STATE EXPENDITURE : DETAILS, 1948-49.

Particulars.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Total
TOTAL EXPENDITURE. (£.)							
Public debt (interest, sinking fund, exchange, etc) ..	15,327,153	8,695,879	6,443,121	5,378,077	4,496,318	1,573,984	41,914,532
Railways, Tramways and Omnibuses (working expenses)	43,025,184	17,024,103	13,686,658	6,091,058	7,479,961	7,346	87,914,310
Harbours and Rivers, etc.	900,957	142,908	..	442,738	121,954	..	1,608,557
Water Supply, Sewerage, Irrigation and Drainage ..	..	1,259,765	..	880,103	674,071	..	2,813,939
Other Business and Industrial Undertakings ..	..	659,211	1,240	149,709	956,129	(b) 551,655	2,317,944
Education ..	11,421,530	2,231,156	3,638,503	2,258,114	2,076,503	1,151,374	27,778,370
Health and Charitable Justice ..	9,013,349	4,512,382	3,526,501	1,881,573	1,705,919	1,017,087	22,201,786
Police ..	1,058,363	793,181	373,596	153,353	165,011	82,544	2,536,048
Penal establishments	2,650,069	1,651,996	1,302,645	557,254	521,871	222,356	6,906,191
Public safety ..	737,411	220,174	102,054	88,133	83,635	49,722	1,281,129
All other expenditure	10,897,374	5,970,898	3,721,166	16,758	46,822	12,532	643,687
				3,632,566	3,049,113	1,176,725	8,448,382
Total ..	95,918,245	48,224,662	32,929,355	22,129,381	21,377,907	5,845,325	226,424,875

(a) See § 1, par 2, page 797.

(b) Transport Commission loss.

STATE EXPENDITURE: DETAILS, 1948-49—continued.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
PER HEAD OF POPULATION.(a)							
(£ s. d.)							
Public debt (interest, sinking fund, exchange, etc.) ..	5 0 1	4 2 4	5 13 7	8 1 8	8 12 2	5 17 4	5 7 11
Railways, Tramways and Omnibuses (working expenses)	14 0 10	8 1 1	12 1 3	10 1 2	14 6 6	0 0 7	11 6 4
Harbours and Rivers, etc. ..	0 5 11	0 1 4	..	0 13 4	0 4 8	..	0 4 2
Water Supply, Sewerage, Irrigation and Drainage ..	..	0 11 11	..	1 6 6	1 5 10	..	0 7 3
Other Business and Industrial Undertakings ..	..	0 6 2	..	0 4 6	1 16 7	2 1 2	0 6 0
Education ..	3 14 6	3 8 6	3 4 2	3 7 11	3 19 6	4 5 10	3 11 6
Health and charitable Justice ..	3 2 9	2 2 9	3 2 2	2 16 7	3 5 4	3 15 10	2 17 4
Police ..	0 6 11	0 6 8	0 6 7	0 4 7	0 6 4	0 6 2	0 6 6
Penal establishments	0 17 4	0 15 8	1 3 0	0 16 9	1 0 0	0 16 7	0 17 9
Public safety ..	0 4 10	0 2 1	0 1 9	0 2 8	0 3 2	0 3 8	0 3 4
All other expenditure	0 1 10	0 1 5	0 2 4	0 0 6	0 1 10	0 0 11	0 1 8
	3 11 1	2 16 6	3 5 7	5 9 3	5 16 10	4 7 9	3 13 3
Total ..	31 6 1	22 16 5	29 0 5	33 5 5	40 18 9	21 15 10	29 3 0

(a) Based on mean population of financial year.

(ii) 1938-39 and 1944-45 to 1948-49. Expenditure for the years 1938-39 and 1944-45 to 1948-49 are shown in the following table:—

STATE EXPENDITURE.

(£'000.)

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Public debt (interest, sinking fund, exchange, etc.) ..	40,158	46,030	40,940	40,322	40,626	41,915
Railways, Tramways and Omnibuses (working expenses) ..	38,138	62,005	61,086	62,505	74,311	87,914
Harbours and rivers, etc. ..	680	895	1,124	1,241	1,332	1,609
Water Supply, Sewerage, Irrigation and Drainage ..	1,076	1,782	2,124	2,135	2,456	2,814
Other Business and Industrial Undertakings ..	1,035	1,671	1,785	1,184	1,467	2,318
Education ..	12,639	15,694	17,336	20,671	23,964	27,778
Health and Charitable Justice ..	15,397	11,894	12,766	14,437	18,683	22,262
Police ..	1,323	1,373	1,518	1,828	2,075	2,536
Penal establishments	3,733	4,372	4,589	5,174	5,987	6,906
Public safety ..	646	880	929	965	1,145	1,281
All other expenditure	297	552	477	538	565	644
	13,127	20,090	20,914	22,857	25,109	28,448
Total ..	128,159	167,238	165,588	173,857	197,720	226,425

Division III.—Surplus Revenue.

The following table shows for each of the years 1938-39 and 1944-45 to 1948-49 the total amount and amount per head of the surplus or deficit of each State :—

STATE SURPLUS REVENUE.

Year.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Total.
TOTAL AMOUNT. (£'000.)							
1938-39 ..	-2,459	-787	14	-397	-221	-26	-3,876
1944-45 ..	968	349	569	..	5	-19	1,872
1945-46 ..	371	6	14	..	..	-101	290
1946-47 ..	-1,850	5	16	-60	-48	-66	-2,003
1947-48 ..	-122	-554	-94	-313	-351	-286	-1,720
1948-49 ..	164	-1,383	50	-285	-817	-105	-2,376

PER HEAD OF POPULATION.(b)

	(£ s. d.)						
1938-39 ..	-0 18 0	-0 8 5	0 0 3	-0 13 4	-0 9 5	-0 2 3	-0 11 3
1944-45 ..	0 6 8	0 3 6	0 10 8	..	0 0 2	0 1 6	0 5 1
1945-46 ..	0 2 6	0 0 1	0 0 3	..	..	-0 8 1	0 0 9
1946-47 ..	-0 12 6	0 0 1	0 0 3	-0 1 10	-0 1 11	-0 5 2	-0 5 4
1947-48 ..	-0 0 10	-0 5 4	-0 1 8	-0 9 7	-0 13 10	-1 1 10	-0 4 6
1948-49 ..	0 1 1	-0 13 1	0 0 11	-0 8 7	-1 11 3	-0 7 10	-0 6 1

(a) See § 1, para. 2, page 797.

(b) Based on mean population of each financial year.

NOTE.—Minus sign (—) indicates deficit.

§ 3. State Trust Funds.

In addition to the moneys received as revenue and paid to the credit of Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. The balances of trust funds held on 30th June of the years 1939 and 1945 to 1949 were as follows :—

**STATE TRUST FUND BALANCES.
(£'000.)**

At 30th June.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939 ..	15,684	8,189	3,062	1,448	3,744	530	32,657
1945 ..	27,810	19,915	30,837	2,097	7,335	1,105	89,099
1946 ..	26,387	19,732	32,294	1,913	8,171	1,131	89,628
1947 ..	23,753	18,880	30,525	2,352	8,081	923	84,514
1948 ..	35,297	17,303	29,751	2,855	8,639	709	94,554
1949 ..	29,559	16,448	29,924	2,689	9,380	609	88,600

(a) Special Deposits Account and Special Accounts.

§ 4. State Loan Funds.

1. **General.**—As far back as 1842 revenue collections were supplemented by borrowed moneys, the earliest loan being raised by New South Wales for the purpose of assisting immigration, at rates of interest varying from 2½d. to 5½d. per £100 per diem, or

approximately from $4\frac{1}{2}$ per cent. to 8 per cent. per annum. Australian public borrowing, however, is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to private enterprise. Foremost amongst these are the construction and control of the railway systems. Loan moneys have also been largely used for improvements to harbours and rivers, and for the construction of roads, water supply and sewerage works. The State loan expenditure and public debt thus differ very materially from those of most European countries, and from those of the Commonwealth, where such expenditure was very largely incurred for defence or war purposes. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are to a very large extent represented by tangible assets.

Statements relating to Loan Expenditure are given below for both "gross" and "net" expenditure. The gross expenditure represents the amounts disbursed during each year whereas the net expenditure represents the gross expenditure less any credits to the Loan Fund during the year on account of repayments of advances to local governing bodies, settlers, etc., the sale of assets, and transfers from other funds. Such moneys are credited to the Loan Fund in the year of repayment irrespective of when the advance was made.

2. Details of Loan Expenditure.—(i) *Gross Loan Expenditure*, 1948-49. Particulars of the gross loan expenditure on Works, Services, etc., for the year 1948-49 are given in the following table:—

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1948-49.
(£.)

Heads of Expenditure.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Public Works and Services—							
Railways	8,190,000	1,344,265	1,098,137	927,870	362,344	539,322	12,461,938
Tramways and Omnibuses	1,416,723	..	..	325,000	97,537	..	1,839,260
Roads	7,431	392,277	875,471	..	..	..	..
Bridges	49	..	..	..	..	..	..
Harbours and Rivers	665,628	172,068	29,007	162,362	224,970	158,545	2,687,808
Lights and Lighthouses .. ..	..	..	..	..	..	..	..
Water Supply .. ..	..	2,251,873	150,000	739,608	463,931	..	4,287,130
Sewerage	200,285	13,930	..	231,002	235,595	..	..
Electricity Supply	247,188	..	..	1,500,000	1,065,343	1,955,000	4,767,531
Public Buildings	2,662,536	1,609,079	1,147,634	444,340	585,902	475,802	6,925,297
Loans and Grants to Local Bodies	142,727	74,156	1,223,986	..	..	..	1,440,869
Unemployment Relief Works .. ..	..	..	..	..	..	..	..
Housing(b)	1,471,199	193,676	100,474	1,419,513	..	1,178	1,178
Other Public Works, etc.	331,747	149,940	..	15,315	72,894	168,168	3,353,035
Primary Production—							
Soldier Settlement	4,530,486	4,181,682	518	4,918	..	195,077	13,304
Land for Settlement .. ..	..	10,144	196	35,556	..	178,086	223,982
Advances to Settlers .. ..	..	..	..	..	..	..	..
Water Conservation	2,162,364	..	389,925	872	45,221	..	2,743,632
Irrigation and Drainage .. ..	..	16,019	..	55,272	89,978	..	16,019
Rabbit-proof Fencing .. ..	..	..	..	(c)	..	..	..
Agriculture	158	..	275,719	..	17,343	..	293,220
Agricultural Bank .. ..	..	..	850,000	..	..	..	850,000
Forestry	750,546	1,331,021	708,889	452,580	29,995	..	3,273,031
Mines and Mineral Resources	92,546	40,558	27,161	585,000	328,298	..	1,073,563
Other	87,986	523	4,000	..	116	58	92,683
Other Purposes .. ..	..	(d) 945,883	..	182,525	190,477	14,095	1,332,980
Total Public Works, Services, etc., Expenditure	22,959,550	12,727,149	7,118,537	7,149,115	3,818,724	4,407,581	58,180,650
Per Head of Population	£7 9 10	£6 0 5	£4 5 5	£10 15 1	£7 0 3	£10 8	£7 9 10

(a) Expenditure from Loan Funds and on account of Loans; includes expenditure from Loan Funds, from Treasury's Advance Account, and from State Loans Repayment Fund. (b) Excludes expenditure from Commonwealth loans under Commonwealth-State housing agreements. (c) Included with Advances to Settlers. (d) Includes purchase of overseas coal, £843,000.

(ii) *Net Loan Expenditure, 1948-49.* For the year ended 30th June, 1949. State net loan expenditure on Works, Services, etc., was as follows :—

STATE NET LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1948-49.
(£.)

Heads of Expenditure.	N.S.W.	Victoria. (a)	Q'land.	S.Aust. (b)	W.Aust.	Tas.	Total.
Public Works and Services—							
Railways ..	8,099,017	1,344,065	1,069,139	901,144	359,221	400,147	12,172,733
Tramways and Omnibuses ..	1,373,341	..	..	291,190	97,250	..	1,761,787
Roads ..	..	366,705	708,777	17,000	..	..	..
Bridges ..	..	2,293	..	..	..	..	..
Harbours and Rivers ..	657,342	168,314	27,228	137,766	224,499	102,155	2,338,995
Lights and Lighthouses ..	..	..	..	..	..	..	..
Water Supply ..	122,895	2,238,252	150,000	705,688	458,978	..	4,121,496
Sewerage ..	..	12,585	..	213,394	219,704	..	..
Electricity Supply ..	202,101	..	..	1,200,000	1,000,000	1,750,000	4,854,178
Public Buildings ..	2,618,427	1,608,422	1,141,788	435,774	549,572	464,753	6,818,736
Loans and Grants to Local Bodies ..	141,354	72,475	717,369	954	67	17,197	912,680
Unemployment Relief Works ..	57,238	27,113	..	..	..	101	84,250
Housing (c) ..	1,394,013	33,737	17,108	1,001,358	1,024	74,735	2,485,711
Other Public Works, etc. ..	331,544	1,000,000	..	31,010	72,797	69,222	1,404,485
Primary Production—							
Soldier Settlement ..	..	3,639,590	33,912	237,797	662	63,841	4,000,850
Land for Settlement ..	4,200,400	970,334	19,093	21,127	5,731	13,900	..
Advances to Settlers ..	..	12,689	24,020	40,834	..	88,742	11,199
Water Conservation ..	2,076,129	..	221,021	634	45,021	..	2,467,548
Irrigation and Drainage ..	..	..	..	35,219	89,524	..	..
Rabbit-proof Fencing ..	..	5,508	16,621	(e)	2,021	..	24,150
Agriculture ..	158	..	275,551	..	15,300	..	291,000
Agricultural Bank ..	..	..	769,577	..	(f) 59,817	..	769,760
Forestry ..	748,869	1,018,319	708,889	37,262	29,995	..	2,468,810
Mines and Mineral Resources ..	87,698	34,953	20,742	585,000	324,608	..	1,053,001
Other ..	87,933	72,225	43,140	2,320	116	3,305	32,956
Other Purposes ..	..	(g) 945,883	26	137,653	(i) 83,221	14,095	905,520
Total Public Works, Services, etc., Expenditure	22,055,546	10,534,028	5,866,180	5,214,234	3,580,294	3,524,960	50,775,251
Per Head of Population..	£7 4 0	£4 19 8	£5 3 5	£7 10 9	£5 17 1	£13 2 10	£6 10 9

(a) Expenditure from Loan Funds and on account of Loans; includes expenditure from Loan Funds, from Treasurer's Advance Account, and from State Loans Repayment Fund. (b) Credits arising from the cancellation of securities redeemed from Sinking Fund are not included. (c) Excludes expenditure from Commonwealth Loans under Commonwealth State Housing Agreement. (d) Includes Immigration, £10,443. (e) Included in Advances to Settlers. (f) Government Agency Department of Rural and Industries Bank. (g) Includes purchase of overseas coal, £843,000. (h) Includes State Bank (£220,953). (i) Includes Rural and Industries Bank (£27,889).

3. *Loan Expenditure on Works, Services, etc., 1938-39 and 1944-45 to 1948-49.*—

(i) *Gross Loan Expenditure.* Gross loan expenditure on works, etc. for the years 1938-39 and 1944-45 to 1948-49 is shown in the following table :—

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.

Year.	N.S.W.	Victoria. (a)	Q'land.	S.Aust.	W. Aust.	Tas.	Total.
GROSS LOAN EXPENDITURE. (£'000.)							
1938-39 ..	8,789	3,218	3,393	2,529	1,783	1,687	21,390
1941-45 ..	3,139	3,683	1,561	2,621	748	1,201	13,013
1945-46 ..	4,554	2,204	2,409	2,494	1,096	1,523	14,280
1946-47 ..	9,102	7,111	4,532	5,305	2,231	2,056	30,337
1947-48 ..	16,241	11,013	5,822	5,607	3,031	3,463	45,177
1948-49 ..	22,960	12,727	7,118	7,149	3,819	4,408	58,181

(a) See footnote (a) to previous table.

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.—*continued.*

Year.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
PER HEAD OF POPULATION. (£ s. d.)							
1938-39 ..	3 4 3	1 14 5	3 7 4	4 5 0	3 16 4	7 2 0	3 1 11
1944-45 ..	1 1 8	1 16 10	1 9 3	4 4 2	1 10 10	5 2 1	1 15 6
1945-46 ..	1 11 1	1 1 10	2 4 5	3 19 1	2 1 9	6 1 8	1 18 7
1946-47 ..	3 1 5	3 9 9	4 2 7	8 5 8	4 9 9	8 1 6	4 1 0
1947-48 ..	5 8 0	5 6 5	5 4 8	8 11 11	5 19 2	13 4 7	5 18 9
1948-49 ..	7 9 10	6 0 5	6 5 5	10 15 0	7 6 3	16 8 8	7 9 10

(a) See footnote (a) to previous table.

(ii) *Net Loan Expenditure.* The following table shows the works net loan expenditure during each of the years 1938-39 and 1944-45 to 1948-49:—

STATE NET LOAN EXPENDITURE ON WORKS, SERVICES, ETC.

Year.	N.S.W.	Victoria. (a)	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Total.
NET LOAN EXPENDITURE. (£'000.)							
1938-39 ..	5,408	2,290	2,041	1,226	1,636	577	13,178
1944-45 ..	1,723	2,083	431	983	547	372	6,139
1945-46 ..	3,263	39	1,292	1,953	812	560	7,019
1946-47 ..	8,640	5,091	3,579	3,628	2,043	828	23,809
1947-48 ..	15,129	8,786	4,718	3,805	2,537	2,634	37,609
1948-49 ..	22,056	10,534	5,866	5,214	3,580	3,525	50,775

PER HEAD OF POPULATION.

(£ s. d.)

1938-39 ..	1 19 0	1 4 6	2 0 6	2 1 2	3 10 1	2 8 7	1 18 1
1944-45 ..	0 11 11	1 0 10	0 8 1	1 11 7	1 2 7	1 10 1	0 16 9
1945-46 ..	1 2 3	0 0 5	1 3 10	1 13 5	1 13 2	2 4 9	0 19 0
1946-47 ..	2 18 4	2 9 11	3 5 3	5 13 4	4 2 3	3 5 1	3 3 7
1947-48 ..	5 0 8	4 4 11	4 4 10	5 16 8	4 19 9	10 1 3	4 18 10
1948-49 ..	7 4 0	4 19 8	5 3 5	7 16 9	5 17 1	13 2 10	6 10 9

(a) See footnotes (a) and (b) to table in par. 2 (ii) above.

The four tables in this paragraph and paragraph 2 do not include particulars of expenditure on loan discounts and flotations, the funding of deficits, the retirement of treasury bills, and similar items of a nature other than works, services, etc. The aggregate net expenditure on those items to 30th June, 1949 is shown in paragraph 4 following. Summaries of the gross and net expenditure and repayments in respect of all loan purposes for the years 1946-47 to 1948-49 are shown in paragraph 5 following.

4. Total Net Loan Expenditure to 30th June, 1949.—The total net loan expenditure including revenue deficits, etc., of the States from the initiation of borrowing to 30th June, 1949 amounted to £1,200,618,528. The purposes for which this sum was expended are shown in the following table:—

STATE NET LOAN EXPENDITURE TO 30th JUNE, 1949.
(£.)

Heads of Expenditure.	N.S.W.	Victoria.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Public Works and Services—							
Railways..	178,702,562	82,460,200	69,711,352	39,855,103	26,774,446	8,913,153	406,416,816
Tramways and Omnibuses ..	10,977,241	..	..	63,672,022	1,516,593	..	16,165,856
Roads and Bridges	20,990,753	13,124,350	7,430,291	3,859,145	3,183,327	..	45,588,816
Harbours, Rivers, Lighthouses ..	24,522,351	1,706,893	3,664,593	8,948,045	8,051,556	7,895,386	103,376,693
Water Supply ..	41,387,894	38,157,665	1,332,191	22,289,217	12,045,454	..	124,702,461
Sewerage..	..	236,484	..	4,614,679	4,638,877	..	9,490,040
Electricity Supply..	3,258,508	17,839,227	..	3,500,000	4,001,262	11,852,880	40,451,937
Public Buildings	24,432,248	12,938,315	11,156,531	5,316,037	4,097,288	4,100,811	62,641,230
Loans and Grants to Local Bodies ..	1,975,773	1,815,093	20,582,410	9,413	86,469	247,763	24,716,921
Unemployment Relief Works ..	16,221,470	13,147,158	..	..	(c)	333,809	29,702,437
Housing (d)	4,085,723	3,157,266	4,021,744	8,997,198	786,786	586,002	21,634,719
Commonwealth Services ..	3,964,457	..	524,388	1,283,387	..	500,754	6,272,986
Other Public Works and Services (e)	4,976,704	1,082,696	2,916,801	1,024,645	2,061,719	3,570,788	15,633,353
Primary Production—							
Closer Settlement ..	9,006,371	53,157,000	(f)953,162	1,327,267	7,213,722	256,687	121,438,033
Land for Settlement	..	..	817,899	7,349,238	3,518,390	1,853,539	12,739,626
Soldier Settlement	..	..	152,881	1,038,903	2,059,715	200,341	4,453,920
Advances to Settlers	2,252,099	3,757,791	..	4,207,051	1,446,751	..	10,121,730
Water Conservation	..	..	2,407,444	5,224,218	3,205,267	..	40,691,359
Irrigation and Drainage ..	24,200,628	..	..	..	..	..	..
Rabbit-proof Fencing ..	..	917,752	151,412	(h)	339,744	..	1,408,908
Agriculture (i)	5,301,600	1,150,682	1,307,064	..	3,883,899	..	11,643,245
Agricultural Bank..	..	..	3,881,355	..	4,420,799	..	8,302,154
Forestry ..	1,663,002	6,872,241	3,171,511	1,101,672	1,071,912	..	13,880,338
Mines and Mineral Resources ..	756,372	632,867	2,195,198	1,135,000	4,287,168	..	9,006,605
Other ..	606,582	1,133,115	2,402,320	756,851	191,771	316,413	5,407,052
Other Purposes ..	89,283	1,454,945	123,324	(k) 1,995,556	(l)9,354,505	14,095	13,031,708
Total Public Works, Services, etc., Expenditure ..	391,000,762	255,041,833	142,626,016	128,104,647	109,170,862	40,702,421	1,066,646,541
Other than Works, etc.—							
Discounts and Flotation Expenses ..	23,471,568	8,288,637	10,652,581	3,254,264	5,442,169	2,013,009	52,122,228
Revenue and General Cash Deficits ..	38,948,098	9,672,386	5,826,271	8,669,234	12,115,087	2,011,533	77,242,609
Treasury Bills Retired ..	..	..	2,857,150	..	..	..	2,857,150
Other ..	..	..	(m)1,750,000	..	..	..	1,750,000
Grand Total ..	452,420,428	273,002,856	163,712,018	140,028,145	126,728,118	44,726,963	1,200,618,528

(a) Aggregate Gross Loan Expenditure. (b) Loans to Municipal Tramways Trust. (c) Not available separately. (d) Distributed under various particular headings. (e) Expenditure from Commonwealth Loans under Commonwealth-State Housing Agreement has been excluded. (f) Includes Industrial Undertakings and Immigration. (g) Under Prickly Pear Land Act. (h) Includes advances for Rabbit-proof Fencing. (i) Included with Advances to Settlers. (j) Includes Grain elevators, New South Wales and Victoria. (k) Includes Government Agency Department of Rural and Industries Bank, £2,790,262. (l) Includes £1,532,824, State Bank. (m) Includes Rural and Industries Bank, £5,244,600. (n) Contributions to Sinking Fund.

The figures in the foregoing table show the amounts actually expended from loan fund, and differ from those given later in the statements relating to the public debt, which represent the amount of loans still outstanding. The statement above includes all expenditure, whether the loans have been repaid or are still in existence. As in the earlier tables on net loan expenditure, allowance has been made, however, for credits on account of repayments of advances to local government bodies, settlers, etc., the sale

of assets, and transfers from other funds. In the public debt statement, on the other hand, loans repaid are not included, and in the case of loans still outstanding, each is shown according to the amount repayable at maturity, and not according to the amount originally available for expenditure.

5. Total Loan Expenditure, 1946-47 to 1948-49.—The following table gives particulars, in summary form, of the total loan expenditure in each State during each of the years 1946-47 to 1948-49.

STATE LOAN EXPENDITURE, SUMMARY.

(£.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1946-47.							
Works and Services—							
Gross Expenditure ..	9,102,014	7,110,880	4,531,663	5,305,374	2,230,964	2,055,670	30,336,565
Net Expenditure ..	8,639,763	5,091,262	3,578,795	3,627,820	2,043,627	827,985	23,809,252
Repayments ..	462,251	2,019,618	952,868	1,677,554	187,337	1,227,685	6,527,313
Other than Works, etc. (a)—							
Gross Expenditure ..	466,934	6,203	1,345,228	9,747	17,689	119,625	1,965,426
Net Expenditure ..	466,934	6,203	1,293,392	5,449	14,524	119,625	1,906,127
Repayments ..	..	..	51,836	4,298	3,165	..	59,299
Total Loan Expenditure—							
Gross ..	9,568,948	7,117,083	5,876,891	5,315,121	2,248,653	2,175,295	32,301,991
Net ..	9,106,697	5,097,465	4,872,187	3,633,266	2,058,151	947,610	25,715,379
Repayments ..	462,251	2,019,618	1,004,704	1,661,852	190,502	1,227,685	6,586,612
1947-48.							
Works and Services—							
Gross Expenditure ..	16,241,077	11,012,651	5,822,312	5,607,011	3,030,763	3,463,640	45,177,454
Net Expenditure ..	15,129,116	8,785,932	4,717,994	3,804,554	2,537,002	2,634,254	37,608,852
Repayments ..	1,111,961	2,226,719	1,104,318	1,802,457	493,761	829,386	7,568,602
Other than Works, etc. (a)—							
Gross Expenditure ..	1,082,924	134,492	230,419	76,125	45,479	236,618	1,806,057
Net Expenditure ..	1,082,924	..	230,419	76,088	41,133	236,069	1,666,053
Repayments ..	..	134,492	..	37	4,326	549	139,404
Total Loan Expenditure—							
Gross ..	17,324,001	11,147,143	6,052,731	5,683,136	3,076,242	3,700,258	46,983,511
Net ..	16,212,040	8,785,932	4,948,413	3,880,642	2,578,155	2,870,323	39,275,505
Repayments ..	1,111,961	2,361,211	1,104,318	1,802,494	498,087	829,935	7,708,006
1948-49.							
Works and Services—							
Gross Expenditure ..	22,959,550	12,727,149	7,118,537	7,149,115	3,818,724	4,407,581	58,180,656
Net Expenditure ..	22,055,546	10,534,028	5,866,180	5,214,234	3,580,294	3,324,969	50,775,251
Repayments ..	904,004	2,193,121	1,252,357	1,934,881	238,430	882,612	7,405,405
Other than Works, etc. (a)—							
Gross Expenditure—							
Discounts and Flotation Expenses ..	546,308	940,329	412,663	601,750	14,197	257,632	2,772,879
Revenue and General Cash Deficits ..	..	553,704	..	..	..	244,244	797,948
Contribution to Sinking Fund ..	..	..	150,000	..	..	..	150,000
Total ..	546,308	1,494,033	562,663	601,750	14,197	501,876	3,720,827
Net Expenditure—							
Discounts and Flotation Expenses ..	546,308	940,329	412,663	601,750	9,807	246,604	2,757,461
Revenue and General Cash Deficits ..	..	553,704	..	..	..	244,244	797,948
Contribution to Sinking Fund ..	..	..	150,000	..	..	..	150,000
Total ..	546,308	1,494,033	562,663	601,750	9,807	490,848	3,705,409
Repayments ..	..	..	..	..	(b) 4,390	11,028	15,418
Total Loan Expenditure—							
Gross ..	23,505,858	14,221,182	7,681,200	7,750,865	3,832,921	4,909,457	61,901,483
Net ..	22,601,854	12,028,061	6,428,843	5,815,984	3,590,101	4,015,817	54,480,660
Repayments ..	904,004	2,193,121	1,252,357	1,934,881	242,820	893,640	7,420,823

(a) Includes exchange, discounts and flotation expenses, revenue and general cash deficits. Consolidated Revenue Fund.

(b) From

Information relating to the States Public Debts is given in part D. "Commonwealth and State Public Debts (page 816).

C. COMMONWEALTH AND STATE FINANCE.

1. Revenue and Expenditure.—(i) *Consolidated Revenue Funds.* The following tables show the aggregate revenue and expenditure of the Consolidated Revenue Funds of the Commonwealth and States for each of the years 1938-39 and 1944-45 to 1948-49. In these tables the combined Commonwealth and State totals have been adjusted to exclude major duplications, but the separate Commonwealth and State figures are as shown in other sections of this Year Book. The items excluded from the adjusted figures include the following :—payments made by the Commonwealth to the States on account of tax reimbursements, interest under the Financial Agreement, special grants, Price Control reimbursements and estimated payments of pay-roll tax by the States to the Commonwealth.

COMMONWEALTH AND STATE CONSOLIDATED REVENUE FUNDS : REVENUE.

Year ended 30th June—					Common-wealth.	State.	Total.	
							Unadjusted.	Adjusted.
					£'000.	£'000.	£'000.	£m.
1939	..	..	..	..	95,064	124,283	219,347	209.6
1945	..	..	..	..	376,854	169,110	545,964	499.7
1946	..	..	..	..	390,780	165,878	556,658	508.6
1947	..	..	..	..	431,256	171,854	603,110	549.4
1948	..	..	..	..	465,905	196,000	661,905	601.3
1949	..	..	..	..	554,377	224,049	778,426	706.6

COMMONWEALTH AND STATE CONSOLIDATED REVENUE FUNDS : EXPENDITURE.

Year ended 30th June—					Common-wealth.	State.	Total.	
							Unadjusted.	Adjusted.
					£'000.	£'000.	£'000.	£m.
1939	..	..	..	..	94,437	128,159	222,596	212.8
1945	..	..	..	..	376,854	167,238	544,092	498.4
1946	..	..	..	..	390,780	165,588	556,368	509.9
1947	..	..	..	..	431,256	173,857	605,113	549.3
1948	..	..	..	..	464,485	197,720	662,205	601.6
1949	..	..	..	..	554,377	226,425	780,802	709.0

(ii) *Loan Expenditure.* The aggregate gross and net loan expenditures of the Commonwealth and States on Works and Services for the years 1938-39 and 1944-45 to 1948-49 are shown in the following table :—

COMMONWEALTH AND STATE LOAN EXPENDITURE : WORKS AND SERVICES.(a)
(£'000.)

Year ended 30th June—					Gross Loan Expenditure.			Net Loan Expenditure.		
					Common-wealth.(b)	State.	Total.	Common-wealth.(b)	State.	Total.
1939	..	..	3,913	21,399	25,312	3,594	13,178	16,772		
1945	..	..	266,040	13,013	279,053	265,991	6,139	272,130		
1946	..	..	159,743	14,280	174,023	159,727	7,019	166,746		
1947	..	..	48,909	30,337	79,246	48,895	23,809	72,704		
1948	..	..	13,305	45,177	58,482	13,126	37,609	50,735		
1949	..	..	14,492	58,181	72,673	-4,253	50,775	46,522		

(a) Excludes expenditure on loan flotations, funding deficits, etc. (b) Includes expenditure on Defence, War (1939-45) and Repatriation Services.

NOTE.—Minus sign (—) indicates an excess of repayments to loan funds.

2. **Taxation.**—The following table shows the combined Commonwealth and State taxation, and the amount per head of population, for the years 1938-39 and 1944-45 to 1948-49. Taxation collections by the State Governments which are not paid into the Consolidated Revenue Funds have been included.

COMMONWEALTH AND STATE TAXATION : TOTAL COLLECTIONS.

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
COLLECTIONS.						
(£'000.)						
Commonwealth (a)—						
Income Tax	11,882	215,534	214,594	207,765	232,900	272,347
Customs and Excise	47,633	67,177	77,961	102,246	115,605	126,200
Sales Tax	9,308	29,672	33,600	36,265	34,729	39,029
Pay-roll Tax .. ..	..	11,088	11,499	13,647	16,595	19,803
Wheat Tax and Export Charge .. ..	..	..	..	5,500	5,730	18,086
Other	5,288	14,524	15,557	20,193	16,854	15,348
Total	74,111	337,995	353,211	385,616	422,413	490,813
State (b)—						
Income Tax	29,791(c)	821(c)	741(c)	531(c)	416(c)	256
Other	20,716	21,290	24,319	27,895	31,716	36,134
Total	50,507	222,111	225,060	228,426	232,132	236,390
Grand Total	124,618	360,106	378,271	414,042	454,545	527,203

PER HEAD OF POPULATION.

(£ s. d.)

Commonwealth (e)—																				
Income Tax .. .. .	..	..	I	14	3	29	6	8	28	17	8	27	12	8	30	9	8	34	18	4
Customs and Excise .. ..	..	..	6	17	5	9	2	10	10	9	11	13	12	0	15	2	7	16	3	8
Sales Tax .. .. .	..	..	I	6	10	4	0	9	4	10	6	4	16	5	4	10	11	5	0	1
Pay-roll Tax .. .. .	..	..	..	..	..	I	10	2	I	11	0	I	16	4	2	3	6	2	10	9
Wheat Tax and Export Charge .. .. .	..	..	..	..	..	..	..	..	..	..	..	0	14	8	0	15	0	2	6	5
Other .. .. .	..	..	0	15	3	1	19	6	2	1	10	2	13	8	..	4	1	1	19	4
<hr/>																				
Total .. .. .	..	..	10	13	9	45	19	11	47	10	11	51	5	9	55	5	9	62	18	8
<hr/>																				
State (f)—																				
Income Tax .. .. .	..	..	4	6	2	0	2	3	0	2	0	0	1	5	0	1	1	0	0	8
Other .. .. .	..	..	2	19	11	2	18	2	3	5	8	3	14	6	4	3	4	4	13	0
<hr/>																				
Total .. .. .	..	..	7	6	1	3	0	5	3	7	8	3	15	11	4	4	5	4	13	8
<hr/>																				
Grand Total(e) .. .. .	..	..	17	19	5	49	0	15	0	18	5	55	1	4	59	9	11	67	12	0

(a) For details see page 760.

(b) For details see pages 800-3.

(c) Arrears of State Income Tax.

(d) Excludes Tax Reimbursements.

(e) Based on mean population for each financial year.

(f) Based on aggregate mean population of the six States for each financial year.

D. COMMONWEALTH AND STATE PUBLIC DEBT.**§ 1. General.**

Under the Financial Agreement between the Commonwealth and the States in 1927 the Commonwealth and State Public Debts were amalgamated and the Commonwealth Government accepted responsibility for the State Public Debts. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf and the debt is redeemed from a sinking fund to which both the Commonwealth and the States make contributions. Under the agreement the Commonwealth arranges for all borrowings on behalf of the Commonwealth and the States, and Commonwealth securities are issued for all money borrowed. In this issue of the Official Year Book one section is devoted to statistics of Commonwealth and State Public Debt. In previous issues statistics of public debt were included in each of the following three sections—Commonwealth Finance, State Finance, and Commonwealth and State Finance.

In the statistical tables relating to Public Debt the units of currency for debt outstanding and interest payable, with the exception referred to below, are:—Debt in Australia—£ Australian; Debt in London—£ Sterling; Debt in New York—£ (converted from dollars at the rate of \$4.8665 to £1).

The totals shown represent the total “face” or “book” value of the debt without adjustment on account of the differences in currency mentioned above.

In § 3. par. 5 only, details of the debt for the Commonwealth and each State are given in Australian currency.

§ 2. The Financial Agreement between the Commonwealth and the States.

1. **General.**—Full details of the Financial Agreement between the Commonwealth and the States are given in earlier issues of the Official Year Book (*see* No. 37, pages 685 to 690). In this section a summary of the main provisions only is given.

2. **Australian Loan Council.**—The Australian Loan Council was set up to co-ordinate the public borrowings of the Commonwealth and the States. It consists of the Prime Minister of the Commonwealth as Chairman and the Premier of each State, or Ministers nominated by them in writing. Each year the Loan Council examines the loan programmes of the Commonwealth and the States and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.

3. **Loan Raisings for the Commonwealth and States.**—Subject to the decisions of the Loan Council, the Commonwealth arranges for all borrowings for or on behalf of the Commonwealth or any State, and for all conversions, renewals, redemptions, and consolidations of the Public Debts of the Commonwealth and of the States.

If the Loan Council unanimously decides, however, a State may borrow outside Australia in the name of the State, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil all its obligations to bondholders in respect of the money so borrowed and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount and other charges, the Commonwealth or any State may—

- (i) Borrow within its own territory, for any purpose, money from any authorities, bodies, funds or institutions (including Savings Banks) constituted or established under Commonwealth or State law or practice;
- (ii) Borrow from the public by means of counter sales of securities; and
- (iii) Use any available public moneys.

However, any securities issued for money so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

4. **Taking over of State Public Debts.**—The Commonwealth took over on 1st July, 1929—

(a) the balance then unpaid of the gross public debt of each State existing on 30th June, 1927; and

(b) all other debts of each State existing on 1st July, 1929 for money borrowed by that State deemed by the Agreement to be money borrowed by the Commonwealth for and on behalf of the State—

and in respect of these debts assumed, as between the Commonwealth and the States, the liabilities of the States to bond holders.

5. **Transferred Properties.**—In respect of State properties transferred to the Commonwealth under Section 85 of the Constitution, the States, as from 1st July, 1929, were discharged from any liability in respect of principal, interest or sinking fund on so much of the debts bearing interest at 5 per cent. per annum, taken over by the Commonwealth, as amounted to the agreed value of these properties, namely £10,924,323.

6. **Payment of Interest.**—For a period of 58 years from 1st July, 1927 the Commonwealth agreed to contribute the sum of £7,584.912 towards the interest payable on the State debts. The balance of the interest payable on the State debts is paid to the Commonwealth by the States.

7. **Sinking Fund.**—(i) *State Public Debt existing at 30th June, 1927.* A sinking fund at the rate of 7s. 6d. per annum for each £100 of the net public debts of the States existing on 30th June, 1927, and conversions thereof, was established under the terms of the Agreement. The Commonwealth contributes annually from revenue 2s. 6d. per cent. on the net public debts of the States existing at 30th June, 1927 and each State contributes annually 5s. per cent. on the net public debt of such State at 30th June, 1927. The payments of the Commonwealth and of all States except New South Wales will continue for a period of 58 years from 1st July, 1927, and those of New South Wales for a similar period from 1st July, 1928.

(ii) *New Borrowings.* On new borrowings after 1st July, 1927 (except those for redemptions or conversions, or funding a State deficit) a sinking fund at the rate of 10s. per cent. per annum was established and the State and the Commonwealth contribute from revenue equal shares for a period of 53 years from the date of raising. (New South Wales did not commence sinking fund contributions in respect of new loans raised in the financial year 1927–28 until 1st July, 1928.)

(iii) *Loans raised to meet a Revenue Deficit.* In respect of any loan (except any of the loans referred to in par. (iv) below) raised after 30th June, 1927 by a State to meet a revenue deficit accruing after that date, no sinking fund contribution is made by the Commonwealth, but the State makes a sinking fund contribution at the rate of not less than 4 per cent. per annum of the loan for a period sufficient to provide for the redemption of the loan, the contributions being deemed to accumulate at the rate of $4\frac{1}{2}$ per cent. per annum compound interest.

(iv) *Loans raised to meet Revenue Deficits between 30th June, 1927 and 1st July, 1935.* In respect of loans raised by a State or by the Commonwealth on behalf of a State, on the security of Commonwealth Treasury Bills, to meet a revenue deficit accruing after 30th June, 1927 and before 1st July, 1935, special contributions are payable. Details of these contributions are given in Official Year Book No. 37, pages 688 and 689.

(v) *National Debt Commission.* The sinking funds established are controlled by the National Debt Commission which may arrange with any State to act as its agent in connexion with payments due to bond holders. Except where the conditions relating to sinking funds, redemption funds, and funds of a like nature held by a State on 30th June, 1929, precluded such transfer, all such funds were transferred to the National Debt Commission.

(vi) *Operation of Sinking Fund.* Sinking fund contributions made in respect of the debts of a State, and funds of that State transferred to the National Debt Commission, are not accumulated but must be applied, whenever expedient, to the redemption and repurchase of loan securities. When such a loan security is repurchased or redeemed by the National Debt Commission, it is cancelled, and the State, in addition to sinking fund contributions otherwise payable, pays a further annual sinking fund contribution at the rate of $4\frac{1}{2}$ per cent. on the face value of the cancelled security.

(vii) *Oversea Debt.* Sinking fund contributions in respect of oversea debt shall be calculated at the mint par of exchange prevailing on 1st July, 1927.

8. **Borrowing by Semi-Governmental Authorities.**—It was realized at the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of borrowings of large amounts by semi-governmental authorities. In May, 1936, all resolutions passed by the Loan Council in connexion with semi-governmental borrowings were consolidated into one set of rules, which superseded all previous resolutions. This set of rules is regarded as the "Gentlemen's Agreement", and provides, *inter alia*, for the submission of annual loan programmes in respect of semi-governmental authorities proposing to raise £100,000 or more in a year, for the consideration of such programmes in conjunction with the loan programme of the Government concerned, and for the fixing of the terms of individual semi-governmental loans coming within the scope of the annual programme.

§ 3. Commonwealth and State Public Debt Outstanding.

1. **Public Debt and Annual Interest Payable at 30th June, 1949.**—In the following table details are given of the Commonwealth and State Public Debt and annual interest payable at 30th June, 1949.

COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1949.

Particulars.	Maturing in—			Total.
	London. (a)	New York.	Australia.	
DEBT.				
Commonwealth Debt—	£(Stg.)	£	£(Aust.)	£
War (1914-18) Debt(b)—				
Stock and Bonds	10,645,160	..	153,751,904	164,397,064
War and Peace Savings Certificates and Stamps and War Gratuity Bonds ..	..	..	147,790	147,790
Total War (1914-18) Debt.. ..	10,645,160	..	153,899,694	164,544,854
War (1939-45) Debt—				
Stock and Bonds	5,775,000	..	1,110,475,496	1,116,250,496
Advance Loan Subscriptions .. ..	..	..	15,976,590	15,976,590
National Savings Bonds .. .. .	..	..	1,792,050	1,792,050
War Savings and Savings Certificates ..	..	..	62,197,906	62,197,906
War Savings Stamps .. .. .	..	..	139,951	139,951
National Savings Stamps .. .. .	..	..	15,169	15,169
Treasury Bills, Internal .. .. .	..	..	172,000,000	172,000,000
Treasury Bills, Public.. .. .	..	..	123,280,000	123,280,000
Total War (1939-45) Debt.. ..	5,775,000	..	1,485,877,162	1,491,652,162
Works and Other Purposes—				
Stock and Bonds	51,020,609	15,798,438	81,623,213	148,442,260
Treasury Bills and Debentures	1,720,160	..	..	1,720,160
Treasury Bills, Internal .. .. .	..	..	10,810,000	10,810,000
Total, Works and Other Purposes ..	52,740,769	15,798,438	92,433,213	160,972,420
Total Commonwealth Debt	69,160,929	15,798,438	1,732,210,069	1,817,169,436
State Debt—				
Stocks and Bonds	264,735,924	24,663,496	626,208,213	915,607,633
Debentures .. .. .	..	..	40,664,610	40,664,610
Treasury Bills and Debentures—Short Term	22,867,840	..	..	22,867,840
Balance of Debts of States taken over by Commonwealth and still represented by State Securities	29,743,950	..	..	29,743,950
Total State Debt.. .. .	317,347,714	24,663,496	666,872,823	1,008,884,033
Grand Total Commonwealth and State Debt	386,508,643	40,461,934	2,399,082,892	2,826,053,469

(a) See footnote (a) page 819.

(b) See footnote (b) page 819.

COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST
PAYABLE AT 30th JUNE, 1949—continued.

Particulars.	Maturing in—			Total.
	London. (a)	New York.	Australia.	
DEBT PER HEAD OF POPULATION.(c)				
	£ s. d. (Stg.)	£ s. d.	£ s. d. (Aust.)	£ s. d.
Commonwealth Debt—				
War (1914-18) Debt(b)	1 6 11	..	19 9 0	20 15 11
War (1939-45) Debt	0 14 7	..	187 16 2	188 10 9
Works and Other Purposes	6 13 4	1 19 11	11 13 8	20 6 11
Total Commonwealth Debt	8 14 10	1 19 11	218 18 10	229 13 7
Total State Debt.. ..	40 5 7	3 2 7	84 12 11	128 1 1
Grand Total Commonwealth and State Debt	48 17 1	5 2 3	303 4 7	357 3 11

ANNUAL INTEREST PAYABLE.

	£ (Stg.)	£	£ (Aust.)	£
Commonwealth Debt—				
War (1914-18) Debt (b)	338,308	..	5,656,465	5,994,773
War (1939-45) Debt	231,000	..	39,666,932	39,897,932
Works and Other Purposes	1,741,179	694,823	2,726,527	5,162,520
Total Commonwealth Debt	2,310,487	694,823	48,049,924	51,055,234
Total State Debt	9,983,542	911,556	21,395,958	32,291,056
Grand Total Commonwealth and State Debt	12,294,029	1,606,379	69,445,882	83,346,290

INTEREST PER HEAD OF POPULATION.(c)

	£ s. d. (Stg.)	£ s. d.	£ s. d. (Aust.)	£ s. d.
Commonwealth Debt—				
War (1914-18) Debt (b)	0 0 10	..	0 14 4	0 15 2
War (1939-45) Debt	0 0 7	..	5 0 3	5 0 10
Works and Other Purposes	0 4 5	0 1 9	0 6 11	0 13 1
Total Commonwealth Debt	0 5 10	0 1 9	6 1 6	6 9 1
Total State Debt	1 5 4	0 2 4	2 14 4	4 2 0
Grand Total Commonwealth and State Debt	1 11 1	0 4 1	8 15 6	10 10 8

AVERAGE RATE OF INTEREST PAYABLE.

	£ s. d. (Stg.)	£ s. d.	£ s. d. (Aust.)	£ s. d.
Commonwealth Debt—				
War (1914-18) Debt (b)	3 3 7	..	3 13 7	3 12 11
War (1939-45) Debt	4 0 0	..	2 13 6	2 13 8
Works and Other Purposes	3 6 0	4 8 0	2 19 0	3 4 2
Total Commonwealth Debt	3 6 10	4 8 0	2 15 7	2 16 4
Total State Debt	3 2 11	3 13 11	3 4 2	3 4 0
Grand Total Commonwealth and State Debt	3 3 7	3 19 5	2 18 0	2 19 1

(a) The debt maturing and interest payable in London have been adjusted to exclude a temporary increase due to the non-completion of a conversion operation. The amount of the adjustment is:—Debt: Commonwealth—War (1914-18), £217,260; Works and Other Purposes, £82,130; Total, £299,390; States—£1,681,398; Interest payable: Commonwealth—War (1914-18), £8,147; Works and Other Purposes £3,080; Total, £11,227; States—£72,178. (b) Excludes War (1914-18) Debt due to United Kingdom Government (£79,724,220). Repayment of this debt and interest thereon (£3,919,774) were suspended in 1931.

(c) Based on population at 30th June, 1949.

2. Public Debt and Annual Interest Payable, 1939 and 1945 to 1949.—In the following table details are given of the Public Debt and Annual Interest Payable at 30th June, 1939 and 1945 to 1949:—

COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE
AT 30th JUNE.

Particulars.	1939.	1945.	1946.	1947.	1948.	1949. (a)
DEBT.						
Commonwealth Debt—						
War (1914-18) Debt—						
London (b) £ Stg.'000.	11,020	11,020	10,645	10,645	10,645	10,645
Australia .. £ A.'000.	175,194	159,318	159,398	158,742	154,040	153,900
Total War (1914-18) Debt £'000	186,214	170,338	170,043	169,387	164,691	164,545
War (1939-45) Debt—						
London .. £ Stg.'000.	..	6,122	5,775	5,775	5,775	5,775
Australia .. £ A.'000	..	1,357,272	1,510,023	1,531,532	1,508,195	1,485,877
Total War (1939-45) Debt £'000	..	1,363,394	1,515,798	1,537,307	1,513,970	1,491,652
Works and Other Purposes—						
London .. £ Stg.'000	72,097	64,112	53,535	53,285	52,991	52,741
New York .. £'000	15,914	15,791	15,790	15,798	15,855	15,798
Australia .. £ A.'000	43,302	35,606	54,166	65,098	77,906	92,433
Total Debt for Works, etc. £'000	131,313	115,509	123,491	134,181	146,752	160,972
Total Commonwealth Debt—						
London (b) £ Stg.'000	83,117	81,254	69,955	69,705	69,411	69,161
New York .. £'000	15,914	15,791	15,790	15,798	15,855	15,798
Australia .. £ A.'000	218,496	1,552,196	1,723,587	1,755,372	1,740,147	1,732,210
Total Commonwealth Debt £'000	317,527	1,649,241	1,809,332	1,840,875	1,825,413	1,817,169
State Debt—						
London .. £ Stg.'000	384,328	361,392	337,593	333,306	328,190	317,348
New York .. £'000	28,265	25,309	25,113	24,802	24,849	24,663
Australia .. £ A.'000	485,179	514,277	542,645	568,141	611,763	666,873
Total State Debt. £'000	897,772	900,978	905,351	926,249	964,802	1,008,884
Grand Total Commonwealth and State Debt £'000	1,215,299	2,550,219	2,714,683	2,767,124	2,790,215	2,826,053
ANNUAL INTEREST PAYABLE.						
Commonwealth Debt—						
War (1914-18) Debt—						
London (b) £ Stg.'000	426	426	396	396	396	338
Australia .. £ A.'000	6,950	5,982	5,990	5,978	5,657	5,657
Total War (1914-18) Debt £'000	7,376	6,408	6,386	6,374	6,053	5,995
Average Rate .. %	£3 19s. 3d.	£3 15s. 4d.	£3 15s. 2d.	£3 15s. 4d.	£3 13s. 7d.	£3 12s. 11d.
War (1939-45) Debt—						
London .. £ Stg.'000	..	231	231	231	231	231
Australia .. £ A.'000	..	33,093	37,849	39,474	39,942	39,667
Total War (1939-45) Debt £'000	..	33,324	38,080	39,705	40,173	39,898
Average Rate .. %	..	£2 9s. 1d.	£2 10s. 3d.	£2 11s. 8d.	£2 13s. 1d.	£2 13s. 8d.

(a) See footnote (a) page 819.

(b) See footnote (b) page 819.

COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST
PAYABLE AT 30th JUNE—*continued.*

Particulars.	1939.	1945.	1946.	1947.	1948.	1949. (a)
ANNUAL INTEREST PAYABLE— <i>continued.</i>						
Commonwealth Debt— <i>continued.</i>						
Works and Other Purposes—						
London £ Stg.'000	2,978	2,614	1,781	1,776	1,768	1,741
New York .. £'000	778	772	772	732	697	695
Australia .. £ A.'000	1,394	972	1,557	1,893	2,293	2,726
Total Debt for Works, etc.						
£'000	5,150	4,358	4,110	4,401	4,758	5,162
Average Rate .. %	£3 18s. 5d.	£3 15s. 6d.	£3 6s. 7d.	£3 5s. 7d.	£3 4s. 10d.	£3 4s. 2d.
Total Commonwealth Debt						
London (b) £ Stg.'000	3,404	3,271	2,408	2,403	2,395	2,310
New York .. £'000	778	772	772	732	697	695
Australia .. £ A.'000	8,344	40,047	45,396	47,345	47,892	48,050
Total Commonwealth Debt						
£'000	12,526	44,090	48,576	50,480	50,984	51,055
Average Rate .. %	£3 18s. 11d.	£2 13s. 8d.	£2 13s. 8d.	£2 14s. 10d.	£2 15s. 11d.	£2 16s. 4d.
State Debt—						
London .. £ Stg.'000	14,063	13,928	11,733	11,293	10,737	9,983
New York .. £'000	1,441	1,257	1,248	1,000	918	912
Australia .. £ A.'000	17,240	16,742	17,646	18,436	19,686	21,396
Total State Debt						
£'000	33,644	31,927	30,627	30,729	31,341	32,291
Average Rate .. %	£3 14s. 11d.	£3 10s. 11d.	£3 7s. 8d.	£3 6s. 4d.	£3 5s. 0d.	£3 4s. 0d.
Grand Total Commonwealth and State Debt						
£'000	46,170	76,017	79,203	81,209	82,325	83,346
Average Rate .. %	£3 16s. 0d.	£2 19s. 9d.	£2 18s. 4d.	£2 18s. 9d.	£2 19s. 0d.	£2 19s. 1d.

(a) See footnote (a) page 819.

(b) See footnote (b) page 819.

3. State Public Debt and Annual Interest Payable at 30th June, 1949.—In paragraphs 1 and 2 totals only of the States' Public Debt are given. In the following table the total debt of each State and the amounts outstanding per head of population at 30th June, 1949 are shown according to the place of flotation :—

STATE PUBLIC DEBT AT 30th JUNE, 1949 : PLACE OF FLOTATION OF LOANS.

State.	Maturing Overseas.			Maturing in Australia.	Grand Total.
	London.	New York.	Total Overseas.		
DEBT.					
	£ (Stg.)	£	£	£ (Aust.)	£
New South Wales ..	138,864,711	11,195,726	150,060,437	246,432,917	396,493,354
Victoria ..	51,681,842	4,548,370	56,230,212	146,652,953	202,883,165
Queensland ..	45,401,463	4,882,098	50,283,561	93,841,593	144,125,154
South Australia ..	35,298,069	1,768,283	37,066,352	87,653,414	124,719,766
Western Australia ..	38,985,759	2,033,326	41,019,085	61,896,924	102,916,009
Tasmania ..	7,115,870	235,693	7,351,563	30,395,022	37,746,585
Total ..	317,347,714	24,663,496	342,011,210	666,872,823	1,008,884,033

STATE PUBLIC DEBT AT 30th JUNE, 1949: PLACE OF FLOTATION OF LOANS
—continued.

State.	Maturing Overseas.			Maturing in Australia.	Grand Total.
	London.	New York.	Total Overseas.		

DEBT PER HEAD OF POPULATION.

	£ s. d. (Stg.)	£ s. d.	£ s. d.	£ s. d. (Aust.)	£ s. d.
New South Wales ..	44 12 0	3 11 11	48 3 11	79 2 11	127 6 10
Victoria ..	24 3 3	2 2 6	26 5 9	68 11 2	94 16 11
Queensland ..	39 9 1	4 4 10	43 13 11	81 10 11	125 4 10
South Australia ..	52 8 10	2 12 7	55 1 5	130 4 7	185 6 0
Western Australia ..	73 3 10	3 16 4	77 0 2	116 4 0	193 4 2
Tasmania ..	26 8 4	0 17 6	27 5 10	112 16 8	140 2 6
Total ..	40 5 7	3 2 7	43 8 2	84 12 11	128 1 1

The following table shows, as at 30th June, 1949, the amount of interest payable, together with the average rate of interest payable, with separate information for London, New York and Australian maturities.

STATE PUBLIC DEBT AT 30th JUNE, 1949: ANNUAL INTEREST PAYABLE—
LOCATION.

State.	Overseas.			Australia.	Grand Total.
	London.	New York.	Total.		

INTEREST PAYABLE.

	£ (Stg.)	£	£	£ (Aust.)	£
New South Wales ..	4,319,915	377,079	4,696,994	7,663,795	12,360,789
Victoria ..	1,659,197	183,791	1,842,988	4,861,540	6,704,528
Queensland ..	1,504,858	178,169	1,683,027	3,042,429	4,725,456
South Australia ..	1,077,728	71,587	1,149,315	2,853,248	4,002,563
Western Australia ..	1,198,641	92,975	1,291,616	1,980,164	3,271,780
Tasmania ..	223,203	7,955	231,158	994,782	1,225,940
Total ..	9,983,542	911,556	10,895,098	21,395,958	32,291,056

STATE PUBLIC DEBT AT 30th JUNE, 1949: ANNUAL INTEREST PAYABLE—
LOCATION—*continued*.

State.	Overseas.			Australia.	Grand Total.
	London.	New York.	Total.		

AVERAGE RATE OF INTEREST PAYABLE.					
	£ s. d. (Stg.)	£ s. d.	£ s. d.	£ s. d. (Aust.)	£ s. d.
New South Wales ..	3 2 3	3 7 4	3 2 7	3 2 2	3 2 4
Victoria ..	3 4 2	4 0 10	3 5 7	3 6 4	3 6 1
Queensland..	3 6 3	3 13 0	3 6 11	3 4 11	3 5 7
South Australia ..	3 1 1	4 1 0	3 2 0	3 5 1	3 4 2
Western Australia ..	3 1 6	4 11 5	3 3 0	3 4 0	3 3 7
Tasmania ..	3 2 9	3 7 6	3 2 11	3 5 5	3 4 11
Total ..	3 2 11	3 13 11	3 3 9	3 4 2	3 4 0

4. State Public Debt, 1939 and 1945 to 1949.—In the following table the debt of each State and the amounts outstanding per head of population at 30th June, 1939 and 1945 to 1949, are shown.

STATE PUBLIC DEBT.

30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
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DEBT. (£.)							
1939..	359,843,990	179,698,118	127,503,251	108,887,092	95,472,600	26,366,990	897,772,041
1945..	355,050,980	179,405,191	131,433,390	108,870,912	95,894,885	30,322,355	900,977,713
1946..	353,239,936	179,727,273	133,494,729	110,748,786	96,925,931	31,414,101	905,350,756
1947..	362,027,630	183,096,252	135,355,499	114,134,262	99,002,301	32,632,964	926,246,908
1948..	384,078,299	188,945,518	138,693,988	118,851,946	100,274,742	33,957,400	966,801,892
1949..	396,493,354	202,883,165	144,125,154	124,719,766	102,916,009	37,746,585	1,008,884,033

DEBT PER HEAD OF POPULATION.(a)

(£ s. d.)																						
1939..	..	130	18	7	95	13	3	125	4	11	182	10	6	203	2	4	111	1	2	129	3	11
1945..	..	121	13	2	89	7	9	122	0	5	173	11	1	196	12	7	121	19	2	122	6	3
1946..	..	119	19	2	88	15	0	122	6	9	174	9	1	196	16	0	124	13	2	121	14	2
1947..	..	121	5	9	89	2	2	122	6	9	176	13	2	197	0	6	126	18	9	122	13	1
1948..	..	126	19	1	90	7	6	123	0	7	180	12	5	194	11	11	129	8	6	125	12	10
1949..	..	127	6	10	94	16	11	125	4	10	185	6	0	193	4	2	140	2	6	128	1	1

(a) Based on population at 30th June in each year.

In some States certain public utilities such as Tramways, Water Supply and Sewerage, Harbour Services, etc., are controlled by Boards or Trusts, which, in addition to receiving advances from the Central Government, raise loans by public borrowing on their own behalf, while in other States these services are controlled by the Central Governments. Comparison of the debts of the States is therefore difficult, but on page 832 figures showing the aggregate debts of the States, including these local and semi-governmental authorities, are given for the years 1938-39, 1939-40, 1940-41, 1946-47 and 1947-48. Local and semi-governmental debt statistics are not available for the years 1941-42 to 1945-46.

5. Public Debt and Interest Payable in Australian Currency.—In the foregoing tables relating to Commonwealth and State Public Debt the debt outstanding in London is expressed in sterling, and debt outstanding in New York is expressed in pounds converted

from dollars at the rate of \$4.8665 to £1. This method of showing the debt gives no indication of the amount that the Australian Government would have to find to repay the debt. In the following tables the public debt and the interest payable are shown in terms of Australian currency throughout. Debt in London and in New York has been converted to Australian currency at the selling rate of exchange on 30th June, 1949.

COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE AT 30th JUNE, 1949: AUSTRALIAN CURRENCY.

(£A.'000.)

Particulars.	Maturing in—			Total.
	London.(a)	New York. (b)	Australia.	
DEBT.				
Commonwealth Debt—				
War (1914-18) Debt	13,359	..	153,900	167,259
War (1939-45) Debt	7,248	..	1,485,877	1,493,125
Works and Other Purposes ..	66,190	23,985	92,433	182,608
Total Commonwealth Debt ..	86,797	23,985	1,732,210	1,842,992
State Debt—				
New South Wales	174,275	16,997	246,433	437,705
Victoria	64,861	6,905	146,653	218,419
Queensland	56,979	7,411	93,842	158,232
South Australia	44,299	2,685	87,653	134,637
Western Australia	48,927	3,087	61,897	113,911
Tasmania	8,930	358	30,395	39,683
Total State Debt	398,271	37,443	666,873	1,102,587
Commonwealth and State Debt—				
Short-term Debt	30,858	..	306,090	336,948
Other Debt	454,210	61,428	2,092,993	2,608,631
Grand Total Commonwealth and State Debt	485,068	61,428	2,399,083	2,945,579

ANNUAL INTEREST PAYABLE.

Commonwealth Debt—				
War (1914-18) Debt	424	..	5,657	6,081
War (1939-45) Debt	290	..	39,667	39,957
Works and Other Purposes ..	2,186	1,055	2,726	5,967
Total Commonwealth Debt ..	2,900	1,055	48,050	52,005
State Debt—				
New South Wales	5,421	573	7,664	13,658
Victoria	2,082	279	4,862	7,223
Queensland	1,889	270	3,042	5,201
South Australia	1,353	108	2,853	4,314
Western Australia	1,504	142	1,980	3,626
Tasmania	280	12	995	1,287
Total State Debt	12,529	1,384	21,396	35,309
Grand Total Commonwealth and State Debt	15,429	2,439	69,446	87,314

(a) Converted at rate of £ stg. 100 = £A. 125 108.

(b) Converted at rate of \$3.2055 = £A. 1.

C. Public Debt at each Rate of Interest.—(i) *Commonwealth*. The accompanying table gives particulars of the amounts of debt for Commonwealth purposes at 30th June, 1949, at each rate of interest :—

COMMONWEALTH PUBLIC DEBT AT 30th JUNE, 1949 : AMOUNTS AT EACH RATE OF INTEREST.

Rate of Interest.	Maturing in—			Total.
	London.(a)	New York.	Australia.	
Per cent.	£ (Stg.)	£	£ (Aust.)	£
5.0 .. .. .	..	9,945,977	..	9,945,977
4.0	5,775,000	..	73,190,582	78,965,582
3.875 .. .. .	..	..	37,505,706	37,505,706
3.75	10,136,500	..	6,552,140	16,688,640
3.675 .. .. .	..	..	66,510	66,510
3.625 .. .. .	..	..	4,274,740	4,274,740
3.5	5,979,400	1,188,945	..	7,168,345
3.375 .. .. .	..	3,477,037	168,121	3,645,158
3.25	34,955,569	1,186,479	904,777,550	940,919,598
3.2391 .. .. .	..	..	(b) 42,974,111	42,974,111
3.125 .. .. .	..	..	c 225,463,490	225,463,490
3.0	10,594,300	..	14,162,050	24,756,350
2.8347 .. .. .	..	..	(d) 19,223,795	19,223,795
2.5 .. .. .	..	..	46,142,460	46,142,460
2.25	(e) 720,160	..	..	720,160
2.0	(e) 1,000,000	..	(f) 48,084,780	49,084,780
0.75 .. .. .	..	..	g 306,090,000	306,090,000
Overdue .. .. .	..	..	(h) 3,364,817	3,364,817
War (1914-18) Savings Stamps	..	..	14,097	14,097
War (1939-45) Savings Stamps	..	..	139,951	139,951
National Savings Stamps	..	..	15,169	15,169
Total	69,160,929	15,798,438	1,732,210,069	1,817,169,436

(a) Excludes War (1914-18) Debt due to United Kingdom Government, £79,724,220 (rate of interest 4.91667 per cent.) (b) War Savings and Savings Certificates—7 years series. (c) Includes Advance Loan Subscriptions, £15,779,560. (d) Savings Certificates—5 years series. (e) Short term Treasury Bills and Debentures. (f) Includes Advance Loan Subscriptions, £197,030. (g) Includes Internal Treasury Bills, £182,810,000 and Public Treasury Bills, £123,280,000. (h) Includes War (1914-18) Gratuity Bonds, £11,780 and War (1914-18) Savings Certificates, £4,147.

(ii) *States.* The following table shows, for the States combined, particulars of the debt at each rate of interest and according to the domicile of the debt.

STATE PUBLIC DEBT AT 30th JUNE, 1949 : AMOUNTS AT EACH RATE OF INTEREST.

Rate of Interest.	Maturing in—			Total.
	London.	New York.	Australia.	
Per Cent.	£ (Stg.)	£	£ (Aust.)	£
5.0	1,000	4,793,158	..	4,794,158
4.0	15,757,285	..	83,971,567	99,728,852
3.875 .. ..	..	..	57,414,615	57,414,615
3.75	1,568,838	..	44,563,066	46,131,904
3.625 .. ..	..	..	5,117,550	5,117,550
3.5	90,539,800	7,662,385	1,196,502	99,398,687
3.4875 .. ..	..	..	3,220,686	3,220,686
3.375 .. ..	..	5,565,191	12,104,460	17,669,651
3.25	59,621,437	6,642,762	170,343,675	236,607,874
3.125 .. ..	..	..	190,590,382	190,590,382
3.1 .. ..	..	..	4,174,232	4,174,232
3.0	92,398,775	..	27,202,510	119,601,285
2.75	16,074,597	..	..	16,074,597
2.7125 .. ..	..	..	591,866	591,866
2.5	18,516,192	..	4,882,605	23,398,797
2.325 .. ..	..	..	1,735,749	1,735,749
2.25	(a) 21,376,840	..	..	21,376,840
2.0	(a) 1,491,000	..	17,958,440	18,549,440
1.5 .. ..	..	..	1,934,673	1,934,673
1.0 .. ..	..	..	40,664,610	40,664,610
Overdue	1,950	..	105,635	107,585
Total Debt ..	317,347,714	24,663,496	666,872,823	1,008,884,033

(a) Short-term debt.

The variations in the rates of interest payable on the public debts of the States from 1901 to 1949 appear in the following table which shows the percentages of the total debts in various interest groups during the years specified, and the average rate of interest in each year :—

STATE PUBLIC DEBT : PERCENTAGES, ETC., IN VARIOUS INTEREST GROUPS.

Interest Rates.	Percentage of Total Debt at 30th June—							
	1901.	1911.	1921.	1931.	1939.	1941.	1948.	1949.
Not exceeding 3 per cent.	18.0	17.9	10.2	5.3	19.1	18.5	24.0	21.1
Exceeding 3 per cent. but not exceeding 4 per cent.	78.5	81.9	45.4	17.2	62.4	63.6	75.5	75.3
Exceeding 4 per cent. but not exceeding 5 per cent.	3.1	0.1	15.6	36.8	16.0	15.5	0.5	0.5
Exceeding 5 per cent. but not exceeding 6 per cent.	0.4	0.1	23.5	38.4	2.3	2.2	..	..
Exceeding 6 per cent. ..	..	..	5.3	2.3	0.2	0.2	..	..
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Rate of Interest Payable	3.7	3.6	4.4	4.9	3.7	3.7	3.3	3.2

7. **Dates of Maturity.**—(i) *Commonwealth.* In the following tables the Commonwealth Public Debt at 30th June, 1949 is classified according to (a) the latest year of maturity and (b) the earliest year of maturity.

COMMONWEALTH PUBLIC DEBT AT 30th JUNE, 1949.(a)

CLASSIFIED ACCORDING TO LATEST YEAR OF MATURITY.

Year of Maturity.	Maturing in—			Total.
	London.	New York.	Australia.	
	£Stg.'000.	£'000.	£A.'000.	£'000.
1949-50	4,906	..	319,087	323,993
1950-51 .. .. .	..	..	59,489	59,489
1951-52 .. .. .	..	..	36,541	36,541
1952-53 .. .. .	..	..	1,792	1,792
1953-54 .. .. .	..	..	12,656	12,656
1954-55 .. .. .	..	..	40,572	40,572
1955-56 .. .. .	..	9,946	20,961	30,907
1956-57	6,951	1,186	49,361	57,498
1957-58 .. .. .	..	..	58,062	58,062
1958-59 .. .. .	..	..	248,725	248,725
1959-60 .. .. .	..	..	269,179	269,179
1960-61	16,234	..	245,785	262,019
1961-62 .. .. .	..	3,477	176,648	180,125
1962-63 .. .. .	..	..	48,126	48,126
1963-64	5,775	..	63,231	69,006
1965-66	5,979	..	..	5,979
1966-67 .. .. .	..	1,189	..	1,189
1969-70	18,392	..	..	18,392
1974-75	330	..	..	330
1977-78	10,594	..	..	10,594
War (1939-45) Savings and Savings Certificates—				
Seven years series .. .. .	..	..	42,974	42,974
Five years series .. .. .	..	..	19,224	19,224
War (1939-45) Savings Stamps .. .. .	..	..	140	140
National Savings Stamps .. .. .	..	..	15	15
Advance Loan Subscriptions .. .. .	..	..	15,977	15,977
War (1914-18) Savings Stamps .. .. .	..	..	14	14
Peace Savings Certificates .. .. .	..	..	118	118
Overdue .. .. .	..	..	3,365	3,365
Half-yearly .. .. .	..	..	168	168
Total	69,161	15,798	1,732,210	1,817,169

(a) See notes to table on page 825.

COMMONWEALTH PUBLIC DEBT AT 30th JUNE, 1949.(a)

CLASSIFIED ACCORDING TO EARLIEST YEAR OF MATURITY.

Year of Maturity.	Maturing in—			Total.
	London.	New York.	Australia.	
	£Stg.'000.	£'000.	£A.'000.	£'000.
1949-50	4,906	..	365,230	370,136
1950-51 .. .. .	..	..	793,144	793,144
1951-52 .. .. .	..	..	36,541	36,541
1952-53	6,951	9,946	37,462	54,359
1953-54 .. .. .	..	..	19,275	19,275
1955-56	16,234	..	148,498	164,732
1956-57 .. .. .	..	1,186	89,741	90,927
1957-58 .. .. .	..	..	26,090	26,090
1959-60 .. .. .	..	..	11,843	11,843
1960-61	5,775	..	63,231	69,006
1961-62	5,979	3,477	11,034	20,490
1962-63 .. .. .	..	..	48,126	48,126
1964-65	330	..	..	330
1965-66	18,392	..	..	18,392
1966-67 .. .. .	..	1,189	..	1,189
1975-76	10,594	..	..	10,594
War (1939-45) Savings and Savings Certificates—				
Seven years series .. .. .	..	..	42,974	42,974
Five years series .. .. .	..	..	19,224	19,224
War (1939-45) Savings Stamps .. .. .	..	..	140	140
National Savings Stamps .. .. .	..	..	15	15
Advance Loan Subscriptions .. .. .	..	..	15,977	15,977
War (1914-18) Savings Stamps .. .. .	..	..	14	14
Peace Savings Certificates .. .. .	..	..	118	118
Overdue .. .. .	..	..	3,365	3,365
Half-yearly .. .. .	..	..	168	168
Total	69,161	15,798	1,732,210	1,817,169

(a) See notes to table on page 825.

(ii) *States.* Particulars of State Public Debt at 30th June, 1949 have been classified in the following tables according to (a) the latest year of maturity and (b) the earliest year of maturity.

STATE PUBLIC DEBT AT 30th JUNE, 1949.
CLASSIFIED ACCORDING TO LATEST YEAR OF MATURITY.

Year of Maturity.	Maturing in—			Total.
	London.	New York.	Australia.	
	£ Stg.'000.	£'000.	£ A.'000.	£'000.
1949-50	34,704	..	31,418	66,122
1950-51	11,707	..	21,317	33,024
1951-52 .. .. .	..	..	36,944	36,944
1952-53	11,789	..	1,104	12,893
1953-54	10,796	..	15,522	26,318
1954-55	3,205	..	42,322	45,527
1955-56 .. .. .	..	4,793	36,590	41,383
1956-57 .. .. .	..	6,643	25,060	31,703
1957-58	20,141	..	53,548	73,689
1958-59	21,084	..	43,484	64,568
1959-60 .. .. .	..	..	93,579	93,579
1960-61	18,575	..	67,970	86,545
1961-62 .. .. .	..	5,565	46,164	51,729
1962-63 .. .. .	..	..	60,809	60,809
1963-64 .. .. .	..	..	33,119	33,119
1964-65	12,870	..	1,564	14,434
1965-66	10,000	..	1,084	11,084
1966-67	23,982	7,662	2,451	34,095
1967-68	15,000	..	2,202	17,202
1968-69 .. .. .	..	..	2,455	2,455
1969-70	43,419	..	3,242	46,661
1970-71	11,546	..	2,369	13,915
1971-72	16,075	..	2,177	18,252
1972-73 .. .. .	..	..	2,249	2,249
1973-74	13,530	..	3,340	16,870
1974-75	32,120	..	1,611	33,731
1975-76 .. .. .	..	..	1,734	1,734
1976-77 .. .. .	..	..	1,759	1,759
1977-78	4,405	..	1,839	6,244
1978-79 .. .. .	..	..	1,921	1,921
1979-80 .. .. .	..	..	2,008	2,008
1980-81 .. .. .	..	..	2,098	2,098
1981-82 .. .. .	..	..	2,193	2,193
1982-83 .. .. .	..	..	1,661	1,661
Overdue	2	..	106	108
Interminable	1	..	..	1
Treasurer's option	2,397	..	..	2,397
Half-yearly drawings .. .. .	..	..	7,396	7,396
Indefinite .. .. .	..	..	10,464	10,464
Total	317,348	24,663	666,873	1,008,884

STATE PUBLIC DEBT AT 30th JUNE, 1949.
CLASSIFIED ACCORDING TO EARLIEST YEAR OF MATURITY.

Year of Maturity.	Maturing in—			Total.
	London.	New York.	Australia.	
	£ Stg.'000.	£'000.	£ A.'000.	£'000.
Before 30th June, 1949 ..	20,968	..	..	20,968
1949-50	30,569	..	36,299	66,868
1950-51	22,586	..	176,197	198,783
1951-52 .. ..	..	..	36,944	36,944
1952-53 .. ..	..	4,793	41,980	46,773
1953-54	21,084	..	37,211	58,295
1954-55	20,141	..	1,446	21,587
1955-56	16,066	..	29,438	45,504
1956-57 .. ..	..	6,643	66,013	72,656
1957-58 .. ..	..	..	53,354	53,354
1958-59	14,055	..	1,668	15,723
1959-60 .. ..	..	..	15,833	15,833
1960-61 .. ..	..	..	33,427	33,427
1961-62	23,982	5,565	14,966	44,513
1962-63	12,871	..	60,809	73,680
1963-64	10,000	..	3,365	13,365
1964-65	13,603	..	1,564	15,167
1965-66	56,498	..	1,084	57,582
1966-67 .. ..	..	7,662	2,451	10,113
1967-68	16,074	..	2,202	18,276
1968-69 .. ..	..	..	2,455	2,455
1969-70	18,516	..	3,242	21,758
1970-71 .. ..	..	..	2,369	2,369
1971-72	13,530	..	2,177	15,707
1972-73 .. ..	..	..	2,249	2,249
1973-74 .. ..	..	..	3,340	3,340
1974-75 .. ..	..	..	1,611	1,611
1975-76	4,405	..	1,734	6,139
1976-77 .. ..	..	..	1,759	1,759
1977-78 .. ..	..	..	1,839	1,839
1978-79 .. ..	..	..	1,921	1,921
1979-80 .. ..	..	..	2,008	2,008
1980-81 .. ..	..	..	2,098	2,098
1981-82 .. ..	..	..	2,193	2,193
1982-83 .. ..	..	..	1,661	1,661
Overdue	2	..	106	108
Interminable	1	..	..	1
Treasurer's option	2,397	..	..	2,397
Half-yearly drawings .. ..	..	..	7,396	7,396
Indefinite .. ..	..	..	10,464	10,464
Total	317,348	24,663	666,873	1,008,884

Under the Financial Agreement Act 1944, Treasury Bills issued to meet State revenue deficits accruing between 1st July, 1928 and 30th June, 1935 were retired on 31st December, 1944. In place of those not redeemed, one per cent. debentures amounting to £43,018,000 were issued. One of these debentures will mature in each year up to 1983. Particulars of these debentures are included under their respective years of maturity in the tables above.

8. *Short Term Debt.*—(i) *Amount.* Particulars of the short-term debt (Treasury Bills and Debentures) of the Commonwealth and States in London and in Australia at 30th June, 1939 and at intervals from 30th June, 1945 to 30th June, 1949 are given in the following table. This debt is included in the public debt as shown elsewhere.

COMMONWEALTH AND STATE SHORT-TERM DEBT.(a)

Date.	Maturing in London. (£ Stg.'000.)			Maturing in Australia. (£ A.'000.)		
	Common-wealth.	States.	Total.	Common-wealth.	States.	Total.
30th June, 1939 ..	4,220	23,155	27,375	..	50,228	50,228
" " 1945 ..	2,720	22,868	25,588	343,280	330	343,610
" " 1946 ..	2,470	22,868	25,338	343,280	..	343,280
" " 1947 ..	2,220	22,868	25,088	278,280	..	278,280
" " 1948 ..	1,970	22,868	24,838	208,280	..	208,280
30th September, 1948	1,970	22,868	24,838	173,280	..	173,280
31st December, 1948	1,720	22,868	24,588	203,280	..	203,280
31st March, 1949 ..	1,720	22,868	24,588	168,280	..	168,280
30th June, 1949 ..	1,720	22,868	24,588	123,280	..	123,280

(a) Excludes Overdrafts and Internal Treasury Bills.

(ii) *Interest Rates.*—(a) *London.* The rates of interest payable on Treasury Bills and Debentures in London during the following periods were : 1938-39 to 1940-41—minimum rate, 2 per cent., maximum rate, $2\frac{1}{4}$ per cent. ; 1941-42 to 1943-44—minimum rate, 2 per cent., maximum rate, 3 per cent. ; 1944-45 to 1948-49—minimum rate, 2 per cent., maximum rate, $2\frac{1}{4}$ per cent.

(b) *Australia.* The Treasury Bill rates in Australia were as follows:— $1\frac{3}{4}$ per cent. from 1st January, 1935 ; $1\frac{1}{2}$ per cent. from 1st May, 1940 ; $1\frac{1}{4}$ per cent. from 1st May, 1943 ; 1 per cent. from 1st March, 1945 ; $\frac{3}{4}$ per cent. from 1st May, 1949.

9. *State and Municipal and Semi-Governmental Authority Public Debt.*—For the reasons indicated on page 823 direct comparisons of the debts of the several States should be made with caution. The table following shows, for 1938-39 to 1940-41 and 1946-47 and 1947-48, particulars of the debts of the States and the debts due to the Public Creditor by municipal and semi-governmental authorities in each State. This affords a more reliable comparison, but as complete records are not available over a long period, particulars showing comparisons of the growth of the debt cannot be made.

STATE AND MUNICIPAL AND SEMI-GOVERNMENTAL AUTHORITY PUBLIC DEBT.

State.	State.	Municipal (a)	Semi-Governmental. (a)	Total.
DEBT, 1947-48. (£'000.)				
New South Wales	384,078	26,998	77,908	488,984
Victoria	188,946	10,744	64,363	264,053
Queensland	138,694	24,231	6,824	169,749
South Australia	118,852	521	11,362	130,735
Western Australia	100,275	1,887	286	102,448
Tasmania	33,957	2,658	647	37,262
Total				
1947-48	964,802	67,039	161,390	1,193,231
1946-47	926,249	61,771	151,767	1,139,787
1940-41	916,022	80,255	132,046	1,128,323
1939-40	905,727	80,316	128,652	1,114,695
1938-39	897,772	78,126	120,512	1,096,410

DEBT PER HEAD OF POPULATION, 1947-48.
(£.)

New South Wales	127.0	8.9	25.8	161.7
Victoria	90.4	5.1	30.8	126.3
Queensland	123.0	21.5	6.1	150.6
South Australia	180.6	0.8	17.3	198.7
Western Australia	194.6	3.7	0.6	198.9
Tasmania	129.4	10.1	2.5	142.0
Total				
1947-48	125.6	8.7	21.0	155.3
1946-47	122.7	8.2	20.1	151.0
1940-41	129.3	11.3	18.7	159.3
1939-40	129.1	11.4	18.3	158.8
1938-39	129.2	11.2	17.4	157.8

(a) Due to public creditor and excludes amounts due to Central Government. Includes Bank overdrafts.

Details of the debt of local and semi-governmental authorities were not compiled for the years 1941-42 to 1945-46.

§ 4. Commonwealth Loan Raisings.

1. **New Loans Raised 1939-40 to 1948-49.**—Under the Financial Agreement between the Commonwealth and the States, the Commonwealth is responsible for raising all loan moneys required by both the Commonwealth and the State Governments. Details of loan transactions given in this and the next two paragraphs relate, therefore, to all loans raised for the Commonwealth and the States. During the ten years 1939-40 to 1948-49 new public loans raised in Australia totalled £1,423,247,000. Of this, £1,174,351,000 was raised for Defence, War and Rehabilitation purposes, £45,607,000 for purposes of the Commonwealth-States Housing Agreement, £7,318,000 for public works and other purposes of the Commonwealth, £152,623,000 for public works and other purposes of the States, and £43,348,000 for funding short-term debt on account of States' revenue deficits. Except for £12,000,000 borrowed from the United Kingdom Government in 1940-41 and redeemed in 1943-44, no new loans were raised in London or New York during this period.

COMMONWEALTH NEW LOANS(a) RAISED IN AUSTRALIA.

Month of Raising.	Amount Invited.	Number of Sub- scribers.	Amount Sub- scribed.	Rate of Inter- est.	Year of Maturity.	Price of Issue.	Allocated to—	
							Defence, War (1939-45) and Repatriation Services, etc.	Other Pur- poses.
	£'000.		£'000.	%		£	£'000.	£'000
1939-40—								
December	12,000	(b)	12,000	3½	1942-44	100	2,000	10,000
March	18,000	14,339	8,958	3½	1945	100	7,676	10,489
May	20,000	32,792	9,207	3½	1950-56	100	20,583	..
			6,747	2½	1945			
			13,836	3½	1950-56			
1940-41—								
November	28,000	21,820	7,692	2½	1945	100	20,505	8,000
			20,813	3½	1950-50			
April	35,000	57,217	13,642	2½	1946	100	27,872	8,000
			22,230	3½	1950-56			
1941-42—								
October	30,000	83,376	5,387	2½	1945-46	100	34,158	..
February (First Liberty Loan)	35,000	244,566	28,771	3½	1950-57	100	48,331	..
June (Second Liberty Loan)	35,000	196,443	12,869	2½	1945-46	100	37,373	..
			35,462	2½	1950-58			
June	3,019	(b)	7,032	3½	1946-47	100	..	3,019
			30,341	2½	1950-58			
			3,019	2½	1946-47			
1942-43—								
November (Austerity Loan)	77,300	454,536	22,090	2½	1946-47	100	82,663	..
March (Third Liberty Loan)	100,000	432,088	60,573	3½	1950-58	100	101,802	..
			18,661	2½	1947-48			
June	235	(b)	83,141	3½	1950-59	100	..	235
			235	2½	1947-48			
1943-44—								
October (Fourth Liberty Loan)	125,000	567,379	24,500	2½	1947-49	100	126,406	..
March (First Victory Loan)	150,000	452,609	101,906	3½	1950-58	100	150,547	..
			25,710	2½	1948-49			
			124,837	3½	1950-60			
1944-45—								
September (Second Victory Loan)	112,479	421,408	15,361	2½	1948-49	100	113,937	..
December (c)	43,018	(b)	98,576	3½	1950-60	100	..	43,018
March (Third Victory Loan)	100,000	422,583	43,018	1	1945-83	100	107,302	..
			12,342	2½	1949-50			
			94,960	3½	1950-61			
1945-46—								
July	330	(b)	330	2½	1949-50	100	..	330
September (Fourth Victory Loan)	85,000	260,224	24,100	2½	1949-50	100	87,229	..
March (First Security Loan)	70,000	193,400	63,129	3½	1950-61	100	78,470	..
			17,209	2	1949			
June	6,795	(b)	61,261	3½	1955-58	100	..	6,795
			6,795	3	1956			
1946-47—								
October (Second Security Loan)	64,020	194,858	4,823	2	1949	100	61,270	8,500
			64,947	3½	1955-58	100	..	5,575
December	5,575	(b)	5,575	3	1956			
April (Third Security Loan)	25,000	72,262	1,457	2	1950	100	7,458	22,365
			28,366	3½	1956-59			
1947-48—								
October (Fourth Security Loan)	48,030	95,445	61,225	3½	1956-59	100	21,613	39,612
April (Fifth Security Loan)	35,000	87,452	43,297	3½	1957-60	100	6,624	36,673
1948-49—								
September (Sixth Security Loan)	15,000	84,990	15,058	3½	1959-62	100	58	15,000
March (Seventh Security Loan)	43,239	54,804	11,982	2	1952	100	30,474	31,285
			49,777	3½	1960-63			
Total 1939-40 to 1948-49	1,322,040	..	1,423,247	..	..	..	1,174,351	248,896

(a) Includes loans raised for redemption of Treasury Bills, but excludes conversion loans, loans for redemption of debt maturing in London, short-term debt and certain miscellaneous debt (see below).
 (b) Special issue (taken up by Commonwealth Bank of Australia).
 (c) Debentures issued for purpose of retiring Commonwealth Treasury Bills originally issued to meet revenue deficits of the States between 30th June, 1927 and 1st July, 1935.

In addition to the amounts included in the table above, at 30th June, 1949 £98,520,000 had been subscribed for War Savings and Savings Certificates (Five and Seven Years' Series), £1,792,000 for National Savings Bonds, £155,000 by War and National Savings Stamps and £15,977,000 for advance loan subscriptions.

After allowing for repurchases the net subscriptions to War Savings and Savings Certificates at 30th June, 1949 was £62,198,000.

"Over the Counter Sales," which are small amounts borrowed by the States by virtue of certain statutory rights, are also excluded from the above table. During the ten years these amounted to £19,548,000.

2. **Conversion and Redemption Loans, 1939-40 to 1948-49.**—(1) *Australia.* Particulars of conversion loans raised in Australia during the ten years 1939-40 to 1948-49 are given in the following table:—

COMMONWEALTH CONVERSION AND REDEMPTION LOANS RAISED IN AUSTRALIA.

Month of Raising.	Old Loan.		New Loan.				Reduction in Annual Liability for Interest.
	Amount.	Rate of Interest.	Amount.	Rate of Interest.	Price of Issue.	Year of Maturity.	
	£A.'000.	%	£A.'000.	%	£		£A.'000.
1939-40 .. ..	..	..	..	..	..	..	..
1940-41 .. ..	..	..	..	..	..	..	..
1941-42— October	65,985	4	{ 5,343 60,642	2½ 3½	100 100	1945-46 1950-57	} 535
1942-43— November	21,783	3½	{ 650 21,133	2½ 3½	100 100	1946-47 1950-58	} 114
1943-44— August	12,252	3½	{ 2,973 9,279	2½ 3½	100 100	1947-48 1950-59	} 54
1944-45— September	{ 5,602 35,064	3 4	{ 6,999 33,667	2½ 3½	100 100	1948-49 1950-60	} 301
1945-46— July	{ 13,267 7,890	2½ 3½	{ 13,503 7,054	2½ 3½	100 100	1949-50 1950-61	} 45
1946-47— August	13,548	2½	{ 4,593 8,955	2 3½	100 100	1949 1955-58	} -44
October	17,679	2½	{ 5,260 12,419	2 3½	100 100	1949 1955-58	} -67
1947-48— August	{ 6,422 21,689	3½ 4	{ .. 28,111	3½	100	1956-59	238
October	19,015	2½	19,015	3½	100	1956-59	-119
December	6,000	2½	6,000	3½	100	1956-59	-38
1948-49—							
September	{ 55,231 14,168 7,581 8,058	2½ 3 3½ 3½	{ .. 85,038	3½	100	1962	-293
March	{ 17,291 59,470	2 2½	{ 33,577 43,184	2 3½	100 100	1952 1960-63	} -188
Total	407,995	..	407,995	..	..	..	538

NOTE.—Minus sign (—) indicates an increase in the annual liability for interest.

(ii) *London.* Particulars of conversion loans raised in London prior to 1939-40 are shown on pages 820 and 821 of Official Year Book No. 34 and in previous issues. During the ten years 1939-40 to 1948-49 conversion loans raised in London amounted to £239,039,000. In addition, loans maturing in London amounting to £74,580,000 were repatriated to Australia. Details of these loans are shown in the following table :—

**COMMONWEALTH LOANS RAISED FOR THE CONVERSION AND REDEMPTION
OF LOANS MATURING IN LONDON.**

Month of Raising.		Old Loan.		New Loans.					Reduction in Annual Liability for Interest and Exchange. (a)
		Amount.	Rate of Interest.	Amount raised in—		Rate of Interest.	Price of Issue.	Year of Maturity.	
				London.	Aus- tralia.				
		£Stg. '000.	%	£Stg. '000.	£A.'000.	%	£		£A.'000.
1939-40— December	..	{ 448 4,157 }	3 3½	{ 4,605	..	3½	99	1942-44	-3
1940-41— May	..	13,470	3	13,470	..	3	100	1943-44	..
1941-42— July	..	{ 18,109 11,902 }	5 4½	{ 30,011	..	3½	99	1961-66	527
1942-43— December	..	16,451	2½	16,451	..	3	98	1944-46	-52
1943-44— January	..	4,491	3½	..	5,631	2½	100	1947-48	56
1944-45— September	..	6,131	3	..	7,687	2½	100	1948-49	38
January	..	3,959	3½	..	4,963	3½	100	1950-60	12
1945-46— July	..	94,312	5	60,000	43,017	3½	100	{ 1965-69 1950-61 1958-60 }	2,069
December	..	14,055	5	14,055	..	3	98		352
1946-47— July	..	16,075	3	16,075	..	2½	100	1967-71	50
January	..	4,254	3	..	{ 2,667 2,667 }	2 3½	100	1950 1956-59	23
January	..	{ 17,098 1,418 }	4 3½	{ 18,516	..	2½	100	1970-75	339
1947-48— January	..	15,870	5½	{ 12,870 .. }	..	3 3½	98½ 100	{ 1963-65 1960 }	443
1948-49— August	..	13,988	4	{ 10,000 .. }	..	3 3½	100 100	{ 1964-66 1957-60 }	169
January	..	{ 5,170 14,775 }	3 3½	{ 15,000 .. }	..	3 3½	100 100	{ 1965-67 1962 }	131
January	..	{ 16,027 1,959 }	4 3½	{ 12,986 .. }	..	3 3½	100 100	{ 1972-74 1960-63 }	212
March	..	19,500	3½	{ 15,000 .. }	..	3 3½	100 100	{ 1975-77 1960-63 }	176
Total	..	313,619	..	239,039	93,504	..	..	..	4,542

(a) No account has been taken of cost of issuing the conversion loans at a discount. Exchange calculated at £A.125.375 = £ stg. 100. (b) Loan raised in London. (c) Loan raised in Australia.

NOTE.—Minus sign (—) indicates an increase in the annual liability for interest and exchange.

(iii) *New York.* During 1946-47 the Queensland 6 per cent. loan in New York became due for redemption and the option of redeeming other loans bearing interest at 5 per cent. and 4½ per cent. occurred. In order to take advantage of lower rates of interest, the Commonwealth gave notice that it intended to redeem the latter loans and four loans totalling \$128,000,000 were raised to provide the money for redemption. Particulars of these loans are given in the following table. These operations are the first conversion operations undertaken in New York.

COMMONWEALTH LOANS RAISED IN NEW YORK FOR REDEMPTION OF EXISTING LOANS.

Month of Raising.	Old Loan.		New Loan.				Reduction in Annual Liability for Interest and Exchange. (a)	
	Amount.	Rate of Interest.	Amount.	Rate of Interest.	Price of Issue.	Year of Maturity.	United States of America Currency.	Australian Currency. (b)
	\$'000.	%	\$'000.	%	£		\$'000.	£A.'000.
1946-47—								
August ..	18,329	5	20,000	3½	100	1956	266	83
December ..	17,513	5	25,000	3½	98½	1966	472	147
	7,851	6						
February ..	44,626	4½	45,000	3½	99	1962	489	153
June ..	35,640	5	19,000	3½	97½	1957	500	156
			19,000	3½	97½	1967		
Total ..	123,959	..	128,000	..	..	..	1,727	539

(a) No account has been taken of the cost of issuing the new loans at a discount. (b) Converted at selling rate of exchange on 30th June, 1947—\$3.2002 = £A1.

3. *Summary of Loan Transactions 1939-40 to 1948-49.*—The following table contains a summary of loan transactions on behalf of the Commonwealth and State Governments during the last ten years.

COMMONWEALTH LOAN TRANSACTIONS: SUMMARY.

Year ended 30th June.	New Loans.				Net Increase in Short Term Debt in—			Loans Raised for Conversion or Redemption of Existing Debt Maturing in—			
	Public Loans (a) Raised in—		Net increase of Miscellaneous Debt in— (b)					London.		New York.	
	Aus- tralia.	Lon- don.	Aus- tralia.	Lon- don.	Public.	In- ter- nal.	Lon- don.	Aus- tralia.	Raised in—		
	£A.'000.	£stg. '000.	£A.'000.	£stg. '000.	£A.'000.	£A.'000.	£stg. '000.	£A. '000.	£A. '000.	£stg. '000.	£'000.
1940	50,748	..	11,028	..	— 4,765	..	— 250	..	..	4,605	..
1941	64,377	..	14,197	12,100	1,710	..	— 250	..	..	13,470	..
1942	122,881	..	14,478	..	78,301	2,296	1,474	65,985	..	30,011	..
1943	184,700	..	31,304	254	172,886	8,500	1,399	21,783	..	10,451	..
1944	276,953	..	— 6,952	12,007	77,905	42,718	1,112	12,252	5,631	..	..
1945	264,257	..	147,218	..	— 32,745	32,104	— 250	40,666	12,650	..	..
1946	172,824	..	2,390	— 347	..	330	— 250	21,157	43,017	74,055	..
1947	105,168	..	8,086	..	— 65,000	25,000	— 250	31,227	5,334	34,591	128,000
1948	104,522	..	1,719	..	— 70,000	20,100	— 250	53,126	3,761	12,870	..
1949	76,817	..	9,202	..	— 85,000	41,400	— 250	161,799	23,111	52,986	..

(a) Includes loans raised for redemption of Treasury Bills. (b) "Over the Counter Sales" and net increase in debt on account of Citizens' National Emergency Loans, War Savings and Savings Certificates and Stamps, National Savings Bonds and Stamps, and Advance Loan subscriptions. Debt in London includes Citizens' National Emergency Loans and debt to United Kingdom Government.

NOTE.—Minus sign (—) denotes a decrease in debt.

§ 5. National Debt Sinking Fund.

1. Commonwealth Public Debt.—Particulars relating to the creation of sinking funds are included in issues of the Official Year Book prior to No. 23.

The old sinking funds were merged in the National Debt Sinking Fund on 11th August, 1923. Particulars of receipts and expenditure of the Commonwealth Account for the years 1938-39 and 1944-45 to 1948-49 were as follows:—

COMMONWEALTH PUBLIC DEBT AT 30th JUNE, 1949 : SINKING FUND.

(£.)

Items.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.	Total 1923-24 to 1948-49.
Receipts—							
Balance transferred to Fund on 11th August, 1923	..	..	..	..	..	..	2,262,983
From Consolidated Revenue ..	3,917,825	12,597,457	13,907,377	14,442,955	15,455,643	16,083,160	150,860,076
Repayments of Sundry Loans ..	16,510	219,748	491,933	360,502	453,784	765,943	4,420,447
Purchase-money and Re- payments under War Service Homes Act ..	628,950	851,813	941,978	1,043,185	1,115,247	1,356,848	18,744,266
Half Net Profit Common- wealth Bank ..	321,448	741,943	879,385	937,683	965,720	1,081,496	11,560,321
Reparation Moneys ..	148	..	..	..	..	..	5,574,245
Interest on Investments ..	32,381	20,334	36,387	55,822	30,796	42,128	1,181,762
Other Contributions ..	13,453	12,177	12,177	12,177	12,177	12,177	292,307
Total Receipts ..	4,930,715	14,443,472	16,269,237	16,852,324	18,033,367	19,341,752	194,896,407
Balance brought forward	1,252,784	1,074,316	3,962,583	5,908,167	8,582,997	2,874,469	..
Total ..	6,183,499	15,517,788	20,231,820	22,760,491	26,616,364	22,216,221	194,896,407
Expenditure—Redemptions	5,052,336	11,555,205	14,323,653	14,177,494	23,741,895	4,309,008	176,989,194
Balance carried forward ..	1,131,163	3,962,583	5,908,167	8,582,997	2,874,469	17,907,213	17,907,213

2. State Public Debt.—Prior to the passing of the Financial Agreement Act 1928, the practice by the States of providing sinking funds had been consistently followed in Western Australia only. This Act contains provisions for the establishment of a sinking fund on States' debts (see p. 817). Some particulars of the transactions of the National Debt Sinking Fund (States' Account) for 1948-49 are shown below, and further details are given in the *Finance Bulletin* issued by this Bureau.

STATE PUBLIC DEBT AT 30th JUNE, 1949 : SINKING FUND.

(£.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Total Receipts, 1948-49 ..	4,020,099	2,058,507	1,463,866	1,241,171	1,062,993	347,218	10,193,854
Total Receipts, to 30th June, 1949 ..	53,025,253	26,729,537	19,560,603	16,063,434	14,418,112	4,204,315	134,001,254
Investments Rea- lized (a) ..	..	..	651,302	..	954,395	..	1,605,697
Grand Total to 30th June, 1949 ..	53,025,253	26,729,537	20,211,905	16,063,434	15,372,507	4,204,315	135,606,951
Total Funds applied to Redemptions, 1948-49 ..	4,139,859	2,358,625	1,623,484	1,296,326	1,154,667	413,081	10,986,042
Total Funds applied to Redemptions, to 30th June, 1949 ..	52,914,320	26,600,153	20,134,870	15,947,219	15,309,685	4,185,968	135,092,215
Balance at 30th June, 1949 ..	110,933	129,384	77,035	116,215	62,822	18,347	514,736

(a) Investments of the States' Sinking Funds at 1st July, 1929, transferred to the National Debt Sinking Fund.

E. TAXES ON INCOME.

NOTE.—The following section was written prior to the introduction of the 1950-51 Commonwealth Budget, when certain changes in income taxes were made. For a description of the taxes inclusive of these changes see Appendix to this volume.

1. **General.**—A description of the development of income taxes in Australia appeared in Official Year Book, No. 35, p. 926. Since July, 1943, the Commonwealth, under the uniform tax arrangement, has been the only authority imposing taxes on income.

2. **Present Taxes.**—At the time of writing two taxes on incomes of individuals are imposed by the Commonwealth—Income Tax and Social Services Contribution. Both taxes are based on the same definition of assessable income and both are assessed and collected concurrently. Several taxes are imposed on the income of companies for which assessable income is defined in the same way as for individuals.

3. **Assessable Income.**—Income taxes in Australia are levied, primarily, on all income derived from Australian sources by any person, rather than on income derived from all sources by Australian residents. Thus a non-resident is taxed on income derived in Australia while a resident is, in general, not taxed on income other than dividends derived from overseas (provided the income is taxed in the country in which it is derived).

Certain types of Australian income are exempt from tax in Australia, the most important being income from gold-mining and a small amount of tax-free interest on Commonwealth Government securities. No amount is included in assessable income on account of a house occupied by its owner. Profits derived from the sale of property are not assessable income if such property was not purchased with a view to resale at a profit.

Assessable income is divided into two main groups—personal exertion and property. Personal exertion income includes all wage, salary, business and professional incomes, while property income includes all rents, dividends and interest. Property income is taxed for individual income tax at higher rates than personal exertion income in all cases where the total taxable income exceeds £350. No distinction in rates is made for companies.

Expenses incurred in earning income, certain subscriptions to business associations, and trade union dues, are allowable deductions. Losses incurred in previous years may be carried forward as a deduction.

Because of uncongenial climatic conditions, isolation and high cost of living, taxpayers living in certain areas are allowed an additional deduction. Two zones have been prescribed and the allowances are Zone A, £120 and Zone B, £20.

Income Tax and Social Services Contribution are levied on the taxable income (known as "contributable income" for Social Services Contribution) remaining after making these deductions.

4. **Taxes on Individuals.**—Two income taxes, Social Services Contribution—which was introduced from 1st January, 1946—and Income Tax, are levied on individuals. Social Services Contribution is payable by all persons without dependants whose contributable income exceeds £104 per annum. Persons with dependants are exempt from Social Services Contribution if their annual income does not exceed the minimum as set out in paragraph 6 following. For the income year 1949-50 Income Tax is payable on income in excess of £500 from personal exertion sources alone, and on income in excess of £350 where income from property is included. Rebates of income tax are allowed to taxpayers on account of dependants, and certain medical expenses, taxes and life insurance premiums, etc. paid.

5. **Rebates of Tax.**—No deductions from taxable income are made for dependants but rebates of tax are allowed against income tax assessed. The rebates of tax for dependants are calculated by multiplying the amount specified in the following table for each

dependant by the personal exertion rate of tax applicable to the income plus eighteen pence. The rebate for any dependant cannot exceed the maximum rebate shown in the following table.

DEPENDANTS : CONCESSIONAL ALLOWANCES AND MAXIMUM REBATES.(a)

(£.)

Dependant (Resident).	Income Years 1948-49 and 1949-50.	
	Rebate of Tax on (b)—	Maximum Rebate.
Spouse or female relative (c) having care of taxpayer's children under 16 years of age	150	45
Daughter-housekeeper (c)	150	45
Housekeeper (c) having care of taxpayer's children under 16 years of age	150	45
Parent	150	45
First child under 16 years of age	100	45
Other children under 16 years of age	50	15
Invalid child, step-child, brother or sister over 16 years of age	100	45
Child 16 to 19 years receiving full-time education	100	45

(a) If the dependant is not wholly maintained by the taxpayer or is maintained for part only of the year a partial rebate is allowed. (b) If the taxpayer is entitled to a rebate for a dependant, an additional rebate of tax on £50 reduced by £1 for every £2 by which the income exceeds £250 is allowed. (c) Of a widower or widow.

Rebates at the same rate are allowed on the actual expenditure of the taxpayer on life assurance, superannuation and friendly society contributions (amount limited to £100 in 1948-49 and £150 in 1949-50); medical, hospital, pharmaceutical, optical, diathermic treatment and dental expenses; remuneration of an attendant on a blind or invalid person; expenditure on artificial limbs, artificial eyes or hearing aids; funeral expenses (amount limited to £30); rates and land taxes on non-income producing property (including an owner-occupied house); and gifts to charitable, benevolent or patriotic funds. The amount allowed for dental expenses is limited to £10 for the taxpayer or any one of his dependants and for the whole group medical, hospital, dental, etc., expenses to £50 for the taxpayer or any one of his dependants.

No rebates are allowed against Social Services Contribution, but a concessional rate of contribution is provided where the contributable income does not exceed the sum of the concessional allowances by more than £350 in 1948-49 or £500 in 1949-50.

A rebate of tax is also allowed on the amounts paid as calls to gold-mining, forestry, and oil prospecting companies at one-third of the normal rebate rate.

Interest on Commonwealth Loans issued prior to 1st January, 1940 is subject to the condition that it shall not be taxed at rates higher than those for 1930-31. Interest on Commonwealth Loans issued after 1st January, 1940 and interest on certain State semi-governmental loans issued free of State income tax receive a rebate of 2s. in the £1.

6. Lodgment of Returns and Assessment of Tax.—All persons with incomes in excess of £104 are required to lodge returns by the 31st July each year (31st August for business incomes). Tax and contribution payable are assessed and assessment notices showing the amount payable are issued during the year following the year of income (in most cases from September to June following the lodgment of the return). The approximate amount payable, however, has already been collected during the income year—from employees by deductions from wages and from non-employees by provisional tax and contribution. The amount shown on the assessment notice is therefore adjusted against the amount already collected and any difference either collected or refunded.

7. **Deductions from Wages and Salaries.**—Employers are required to deduct tax and contribution from each payment of wages and salary to an employee at the appropriate rate in accordance with a deduction scale. This scale shows the amount to be deducted according to the number of dependants the employee has, and makes an average allowance for other concessional rebates.

Under the group scheme of deduction, which covers most employers of over ten persons, the amount deducted is remitted to the Taxation Department, and after 30th June each year each employee is given a group certificate by his employer showing the amount of deductions made during the year. The employee then uses the group certificate for that year to meet, in full or in part, the assessment on that year's income when it is received.

Under the stamp scheme, used by small employers, a stamp deduction sheet in two parts is used. Each four weeks the employer purchases stamps (also in two parts) for the amount of the deductions made each pay day and sticks one part on each half of the sheet. At the end of the year the employer gives the employee one half of the sheet and sends the other half to the Taxation Department. The employee's half is then used in the same way as a group certificate.

8. **Provisional Tax.**—For non-employees collection of tax and contribution for the current year is made at the same time as collection and assessment for the previous year is adjusted. The notice of assessment shows an amount of provisional tax and contribution for the current year. This provisional amount is an approximation to the tax and contribution which will be payable after the return of income for the current year has been lodged. It is ascertained by assuming that the income of the current year will be the same as that for the previous year (for which a return has already been lodged) but the rates for the current year are applied to the income and not the rates for the year in which it was derived. The assessment notice shows the provisional tax and contribution paid in the previous year as a credit against the tax and contribution assessed on the basis of the return for that year.

Employees with more than £50 income from sources other than wages and salaries are also required to pay provisional tax in respect of that income.

9. **Effective Exemptions from Tax.**—In 1949-50 taxpayers without dependants were exempt from Social Services Contribution if their income did not exceed £104 and were exempt from Income Tax if their income did not exceed £350 where income from property was included, and £500 where the income was from personal exertion sources only. The effect of the rebates for dependants was to exempt taxpayers (with personal exertion income only) up to the incomes shown below in the years 1948-49 and 1949-50 :—

RESIDENT TAXPAYERS : EFFECTIVE EXEMPTIONS FROM TAX.

(£.)

Taxpayer with—	Social Services Contribution— 1948-49 and 1949-50 Income.	Income Tax.(a)	
		1948-49 Income.	1949-50 Income.
No dependants	104	350	500
Wife	200	501	660
„ and one child	283	613	771
„ „ two children	317	669	827
„ „ three children	350	726	883
„ „ four children	400	783	939

(a) With personal exertion income only.

10. **Rates of Tax on Individuals.**—The following table shows the income tax on 1948-49 and 1949-50 incomes.

INCOME TAX PAYABLE BY INDIVIDUALS: 1948-49 AND 1949-50 INCOMES.

(T = Taxable Income in Pounds.)

Rates.	Personal Exertion.		Property.	
	Taxable Income.	Tax in Pence.	Taxable Income.	Tax in Pence.
1948-49 Income—	£351- £1,000	.03T ^a - 3,675	£351- £500	.06T ^a - 12T - 3,150
	£1,001- £2,000	.02T ^a + 20T - 13,675	£501- £1,000	.03T ^a + 18T - 10,650
	£2,001- £5,000	.006T ^a + 64T - 57,675	£1,001- £2,000	.021T ^a + 36T - 19,650
	£5,001- £9,000	.001T ^a + 144T - 257,675	£2,001- £5,000	.007T ^a + 92T - 75,650
	Over £9,000	162T - 338,675	Over £5,000	162T - 250,650
1949-50 Income—	£501- £1,000	.024T ^a - 6T - 3,000	£351- £500	.005T ^a + 4.25T - 2,100
	£1,001- £2,000	.02T ^a + 2T - 7,000	£501- £1,000	.03T ^a - 2T - 5,225
	£2,001- £5,000	.01T ^a + 42T - 47,000	£1,001- £2,000	.022T ^a + 14T - 13,225
	£5,001- £10,000	.002T ^a + 122T - 247,000	£2,001- £5,000	.008T ^a + 70T - 69,225
	Over £10,000	162T - 447,000	£5,001- £10,000	.0012T ^a + 138T - 239,225
			Over £10,000	162T - 359,225

For 1948-49 income the basic rate of Social Services Contribution was 3d. in the £1 plus three-fiftieths of a penny for every £1 by which the contributable income exceeded £100. The maximum basic rate was 1s. 6d. in the £1 which was reached at an income of £350 and applied to all incomes over that amount. If the contributable income did not exceed the sum of the concessional allowances by more than £350 a concessional rate was provided. The concessional rate was the basic rate multiplied by the ratio of the excess of the contributable income over the sum of the concessional allowances to the lesser of the contributable income or £350.

For the income year 1949-50 the basic rate of Social Services Contribution was 3d. in the £1 plus three-eighths of a penny for every £1 by which the contributable income exceeded £100. The maximum basic rate remained at 1s. 6d. in the £1 and was reached at an income of £500. If the contributable income did not exceed the sum of the concessional allowances by more than £500 a concessional rate was applied.

If the contributable income exceeded the sum of the concessional allowances by less than £100 the concessional rate was threepence multiplied by the ratio of the excess of the contributable income over the concessional allowances to £100. If the contributable income exceeded the sum of the concessional allowances by more than £100 but less than £500 the concessional rate was the basic rate for a contributable income equal to the excess of the contributable income over the sum of the concessional allowances.

Social Services Contribution is payable if the contributable income is greater than £104. The amount of contribution is not to exceed one-half of the amount by which the contributable income exceeds £104 if the contributor has no dependants, or £156 if the contributor is entitled to a concessional rebate in respect of a dependant.

The rate of Income Tax and Social Services Contribution for farmers and pastoralists is determined by the average taxable income of the five years up to the current year, but the rate is applied to the taxable income of the current year.

The minimum amount of Social Services Contribution payable is 10s. and the amounts payable and rebates are calculated to the nearest shilling.

11. Taxes on Sample Individual Incomes.—The following table shows the Income Tax and Social Services Contribution payable by taxpayers with various incomes and numbers of dependants on income derived in 1948-49 and in 1949-50 :—

COMMONWEALTH TAXES ON INCOME.

(£.)

Income.	1948-49 Income Year.			1949-50 Income Year.		
	Income Tax.	Social Services Contribution.	Total.	Income Tax.	Social Services Contribution.	Total.
150 ..	..	3.75	3.75	..	3.05	3.05
200 ..	..	7.50	7.50	..	5.60	5.60
250 ..	..	12.50	12.50	..	9.00	9.00
300 ..	..	18.75	18.75	..	13.10	13.10
350 ..	..	26.25	26.25	..	18.05	18.05
400 ..	4.70	30.00	34.70	..	23.75	23.75
500 ..	15.95	37.50	53.45	..	37.50	37.50
600 ..	29.70	45.00	74.70	8.50	45.00	53.50
800 ..	64.70	60.00	124.70	31.50	60.00	91.50
1,000 ..	109.70	75.00	184.70	62.50	75.00	137.50
1,500 ..	255.50	112.50	368.00	170.85	112.50	283.35
2,000 ..	443.00	150.00	593.00	320.85	150.00	470.85
3,000 ..	897.20	225.00	1,122.20	704.15	225.00	929.15
5,000 ..	2,030.50	375.00	2,405.50	1,720.85	375.00	2,095.85

INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH NO DEPENDANTS.

INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE.

150 ..	..	..	..	..	..	..
200 ..	..	..	..	..	..	..
250 ..	..	2.50	2.50	..	1.55	1.55
300 ..	..	7.80	7.80	..	4.90	4.90
350 ..	..	15.00	15.00	..	9.85	9.85
400 ..	..	21.45	21.45	..	14.35	14.35
500 ..	..	37.50	37.50	..	25.80	25.80
600 ..	11.05	45.00	56.05	..	40.30	40.30
800 ..	41.30	60.00	101.30	14.35	60.00	74.35
1,000 ..	82.00	75.00	157.00	41.90	75.00	116.90
1,500 ..	218.70	112.50	331.20	142.50	112.50	255.00
2,000 ..	398.55	150.00	548.55	285.55	150.00	435.55
3,000 ..	852.15	225.00	1,077.15	659.15	225.00	884.15
5,000 ..	1,985.50	375.00	2,360.50	1,675.85	375.00	2,050.85

INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD.

150 ..	..	..	..	..	..	..
200 ..	..	..	..	..	..	..
250 ..	..	..	..	..	..	..
300 ..	..	1.55	1.55	..	0.95	0.95
350 ..	..	7.50	7.50	..	4.35	4.35
400 ..	..	12.85	12.85	..	8.10	8.10
500 ..	..	26.80	26.80	..	17.95	17.95
600 ..	..	45.00	45.00	..	30.95	30.95
800 ..	25.75	60.00	85.75	2.90	60.00	62.90
1,000 ..	63.55	75.00	138.55	28.15	75.00	103.15
1,500 ..	194.15	112.50	306.65	123.65	112.50	236.15
2,000 ..	368.85	150.00	518.85	262.00	150.00	412.00
3,000 ..	814.80	225.00	1,039.80	628.20	225.00	853.20
5,000 ..	1,940.50	375.00	2,315.50	1,633.95	375.00	2,008.95

COMMONWEALTH TAXES ON INCOME—*continued.*

(£.)

Income.	1948-49 Income Year.			1949-50 Income Year.		
	Income Tax.	Social Services Contribution.	Total.	Income Tax.	Social Services Contribution.	Total.
INCOME FROM PERSONAL EXERTION.—TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN.						
150
200
250
300
350	..	3.75	3.75	..	2.20	2.20
400	..	8.55	8.55	..	5.00	5.00
500	..	21.45	21.45	..	14.05	14.05
600	..	38.55	38.55	..	26.25	26.25
800	..	17.95	60.00	..	60.00	60.00
1,000	..	54.30	75.00	21.25	75.00	96.25
1,500	..	181.90	112.50	114.20	112.50	226.70
2,000	..	354.05	150.00	250.25	150.00	400.25
3,000	..	799.80	225.00	613.20	225.00	838.20
5,000	..	1,925.50	375.00	1,618.95	375.00	1,993.95

INCOME FROM PROPERTY.—TAXPAYER WITH NO DEPENDANTS.

150	..	..	3.75	3.75	..	3.05	3.05
200	..	..	7.50	7.50	..	5.60	5.60
250	..	..	12.50	12.50	..	9.00	9.00
300	..	..	18.75	18.75	..	13.10	13.10
350	..	..	26.25	26.25	..	18.05	18.05
400	..	6.85	30.00	36.85	1.65	23.75	25.40
500	..	24.35	37.50	61.85	5.30	37.50	42.80
600	..	45.60	45.00	90.60	18.25	45.00	63.25
800	..	95.60	60.00	155.60	51.55	60.00	111.55
1,000	..	155.60	75.00	230.60	94.90	75.00	169.90
1,500	..	340.00	112.50	452.50	238.65	112.50	351.15
2,000	..	568.10	150.00	718.10	428.25	150.00	578.25
3,000	..	1,097.30	225.00	1,322.30	886.55	225.00	1,111.55
5,000	..	2,330.60	375.00	2,705.60	2,003.25	375.00	2,378.25

12. *Company Income Taxes.*—(i) *General.* For taxation purposes, companies are divided into two main groups—public companies and private companies. A private company is defined as a company in which all the issued shares are held by not more than twenty persons or which is under the control of not more than seven persons, and which is not a company in which the public are substantially interested or a subsidiary of a public company. Ordinary income tax is imposed on both groups of companies, but other taxes on companies are imposed according as to whether a company is public or private. Pay-as-you-earn taxation and Social Services Contribution have not been applied to companies.

(ii) *Public Companies.* (a) *Ordinary Income Tax.* The income of companies is assessed for Commonwealth Income Tax on the same principles as for individuals. Dividends received are assessable income both for companies and individuals, but resident companies receive a rebate at the average rate on the amount of dividends included in the taxable income. This rebate is not allowed to non-resident companies. The rate of ordinary income tax is 5s. in the £1 on the first £5,000 of taxable income and 6s. in the £1 on the remainder. For mutual life assurance companies this rate is reduced to 4s. in the £1 on the first £5,000 of taxable income and 5s. in the £1 on the remainder. The rate on Commonwealth Loan Interest subject to 1930-31 rates is 1s. 4d. in the £1.

(b) *War-time (Company) Tax.* The War-time (Company) Tax, first imposed in 1940-41 on income derived in 1939-40, was discontinued after 1946-47. Information relating to this tax is given in earlier issues of the Official Year Book (*see* No. 37, page 696).

(c) *Super Tax.* A Super Tax of 1s. in the £1 on the excess of the taxable income over £5,000 is imposed. All companies receive a rebate of 1s. in the £1 on the amount of dividends (from companies which have already paid super tax) included in super tax income.

Commonwealth Loan Interest subject only to 1930-31 rates of tax is excluded from super tax income since the full 1930-31 rate of 1s. 4d. in the £1 is already paid as ordinary income tax.

(d) *Undistributed Income Tax.* Since 1940-41 a tax has been imposed at the rate of 2s. in the £1 on the undistributed income of a public company. The undistributed income is the taxable income less :—

- (a) Commonwealth Income Tax, Super Tax, and War-time (Company) Tax (now discontinued), and tax paid outside Australia on the taxable income ;
- (b) dividends paid out of the taxable income before the expiration of six months (nine months if the company is a non-resident) after the close of the year of income ;
- (c) the net loss incurred in carrying on the company's business outside Australia ; and
- (d) the portion of Commonwealth Loan Interest subject to 1930-31 rates remaining in the undistributed income.

Mutual life assurance companies and non-resident companies not carrying on business in Australia are exempt from the tax.

(iii) *Private Companies.* Private companies are not liable for Super Tax or the normal Undistributed Income Tax. However, an additional tax on the undistributed income is imposed, this tax being based on the close relationship between a private company and a partnership.

The undistributed income is calculated in approximately the same way as for a public company, but, instead of a flat rate of 2s. in the £1 being imposed, the additional Income Tax and Social Services Contribution which would have been payable by the shareholders, if all the income had been distributed, is calculated, and this amount is charged to the company as additional tax on undistributed income. In this way the shareholders of a private company are required to pay approximately the same tax as if they were a partnership or sole traders.

13. *Yield of Income Taxes.*—(i) *Collections from all Income Taxes.* The following table shows the collections of taxes of all types imposed on income for the years 1938-39, and 1944-45 to 1948-49 :—

INCOME TAX COLLECTIONS. (£'000.)

Year.	Individuals.			Companies.			Total.		
	Common-wealth.	State.	Total.	Common-wealth.	State.	Total.	Common-wealth.	State.	Total.
1938-39 ..	7,582	18,314	25,896	4,300	11,498	15,798	11,882	29,812	41,694
1944-45(a) ..	155,731	491	156,222	59,919	203	60,122	215,950	694	216,644
1945-46(a) ..	159,355	367	159,722	55,310	296	55,606	214,665	663	215,328
1946-47(a) ..	154,119	340	154,459	53,379	162	53,541	207,798	502	208,300
1947-48(a) ..	(b)	(b)	(b)	(b)	(b)	(b)	232,947	365	233,312
1948-49(a) ..	(b)	(b)	(b)	(b)	(b)	(b)	272,373	230	272,603

(a) Commonwealth collections are greater than the Budget figures by the amount of refunds of State taxes. State collections are net arrears.

(b) Not available.

(ii) *Commonwealth Income Tax Assessed.* The amounts of Commonwealth taxes assessed on the income of recent years are shown in the following table. The amounts are shown under the year in which most of the assessments were made, i.e., the year following the income year:—

COMMONWEALTH INCOME TAXES ASSESSED.
(£'000.)

Tax.	1939-40.	1944-45.	1945-46.	1946-47.	1947-48.
Individuals—					
Income Tax	7,423	(b) 40,826	148,713	111,281	75,886
Social Services Contribution ..	..	..	..	24,778	62,152
Companies—					
Income Tax	8,041	42,470	41,629	40,099	48,174
Super Tax .. ..	..	3,804	3,761	3,638	4,205
War-time (Company) Tax .. ..	..	4,390	3,537	3,319	..
Undistributed Income Taxes(a)—					
Private Companies	688	(b) 2,289	7,778	12,303	12,596
Non-Private Companies .. ..	..	1,988	2,068	1,967	2,683
Total	16,152	95,767	207,486	197,385	205,696

(a) Approximate.

(b) See note (b) below.

(iii) *Commonwealth Income Tax on Residents—Grades of Income.* Individual income taxes assessed on residents are distributed according to grades of actual income (income before allowing deductions of a concessional nature or statutory exemptions and including exempt income) in the following table. The year shown in each case refers to the year in which assessment was made, i.e., the year following the income year.

COMMONWEALTH INCOME TAXES ON RESIDENT INDIVIDUALS IN GRADES OF ACTUAL INCOME.

Grade of Actual Income.	1939-40.		1944-45.		1945-46.		1946-47.(a)		1947-48.(a)	
	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax. (b)	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.	No. of Tax-payers.	Tax.
£	£	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Under £151	..	..	223,462	330	233,027	1,366	220,366	1,058	214,790	722
151-200	..	..	252,091	875	256,892	3,635	263,536	2,933	262,529	2,298
201-250	..	..	197,041	1,137	201,103	4,719	219,402	4,481	271,790	4,465
251-300	47,732	27	231,504	1,756	247,432	7,637	266,362	7,052	292,173	6,682
301-350	55,375	53	277,991	2,846	296,270	12,104	312,094	11,148	386,160	11,558
351-400	48,835	73	254,095	3,381	249,404	13,206	242,171	11,407	322,688	12,224
401-500	68,168	182	299,858	5,526	267,315	19,762	245,503	16,495	311,376	16,230
501-600	38,939	197	120,818	3,258	112,115	12,253	102,435	10,244	132,164	10,093
601-800	c 29,912	294	90,420	3,594	82,855	13,436	82,078	12,453	102,806	11,830
801-1,000	d 23,070	460	35,161	2,143	32,221	7,991	33,727	7,788	41,840	7,435
1,001-1,250	d 10,922	372	22,307	1,915	20,489	7,136	21,536	7,003	26,715	6,805
1,251-1,500	6,281	306	12,839	1,517	11,552	5,471	12,285	5,416	15,512	5,465
1,501-2,000	7,987	691	13,609	2,285	12,330	8,298	13,111	8,232	16,503	8,319
2,001-4,000	4,549	686	10,491	2,993	9,175	10,441	9,569	10,118	12,645	10,835
3,001-4,000	2,045	615	3,731	1,787	2,959	5,621	3,165	5,595	4,260	6,232
4,001-5,000	984	484	1,616	1,108	1,358	3,675	1,404	3,470	1,888	3,976
5,001-10,000	1,298	1,321	2,051	2,312	1,526	6,687	1,511	6,133	2,159	7,471
10,001-15,000	205	504	332	755	234	1,888	231	1,812	317	2,111
15,001-30,000	(e) . 92	393	171	638	125	1,702	139	1,863	151	1,835
30,001-50,000	(f) 39	316	28	190	18	502	14	359	21	412
50,001 and over	8	141	18	222	5	263	9	355	11	396
Total ..	346,441	7,115	2,049,694	40,568	2,038,465	147,853	2,051,248	135,421	2,438,498	137,394

(a) Includes Social Services Contribution.

(b) As a result of the introduction of the pay-as-you-earn system, the amount of tax assessed in 1944-45 on income derived in 1943-44 was reduced to approximately one-quarter of the amount which otherwise would have been payable.

(c) Grade £601-750.

(d) Grade

(e) Grade £15,001-£25,000.

(f) Grade £25,001-£50,000.

CHAPTER XVIII. MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

1. *Place of Mining in Australian Development.*—The value of production from the mineral industry is now considerably less than that returned by the agricultural, the pastoral or the dairying industry; nevertheless it was the discovery of gold in payable quantities that first attracted population to Australia in large numbers and thus accelerated its national development.

2. *Extent of Mineral Wealth.*—The extent of the total mineral wealth of Australia cannot yet be regarded as completely ascertained, as large areas of country still await systematic prospecting. More detailed reference to this matter will be found in preceding issues of the Official Year Book. (*See No. 22, p. 755.*)

During the years 1934 to 1940 a survey of certain areas in Australia north of the 22nd parallel of South Latitude was undertaken by the Governments of the Commonwealth, Queensland and Western Australia. This survey is referred to in § 16 below.

3. *Quantity and Value of Production in 1947.*—The quantities (where available) and the values of certain of the principal minerals produced in each State, and in Australia as a whole, during 1947, are shown in the tables immediately following. It must be clearly understood that the figures quoted in these tables refer to the quantities and values of the various minerals in the form in which they were reported to the State Mines Departments, and represent amounts which the Mines Departments consider may fairly be taken as accruing to the mineral industry as such. They are not to be regarded as representative of Australia's potentiality as a producer of metals, this matter being dealt with separately in § 17 below. New South Wales is, of course, in normal times, a large producer of iron and steel from ironstone mined in South Australia. As the table shows, the latter State receives credit for this ironstone in its mineral returns. The iron and steel produced therefrom cannot be assigned to the mineral industry of New South Wales, but the value of the transformation from ore to metal is credited to the manufacturing industry of that State. Similarly, lead, silver-lead, cadmium, cobalt and zinc are credited in the form reported to the State of origin—chiefly New South Wales—although the actual metal extraction is carried out principally in South Australia and Tasmania.

The quantities of cadmium and cobalt recovered in Tasmania from zinc ores mined in New South Wales during 1947 are shown in § 8, par. 2 (page 870).

MINERAL PRODUCTION : QUANTITIES, 1947.

Mineral.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
Antimony and Ore	ton	85	5	16	..	120	..	..	226
Arsenic and Ore ..	"	..	..	..	..	1,191	..	..	1,191
Asbestos ..	"	4,021	..	..	39	1,052	..	..	5,112
Barytes ..	"	1,684	..	..	3,729	..	..	..	5,413
Bismuth and Ore ..	cwt.	60	..	26	..	..	8	..	94
Cadmium ..	"	(a)	..	..	..	..	(b) 691	..	(c) 691
Chalk, Talc, Soap-stone, etc.	ton	1,162	..	..	4,460	213	..	..	5,835
Coal—									
Black ..	"	11,683,123	173,683	1,883,414	193,351	730,506	167,140	..	14,831,217
Brown ..	"	..	6,140,140	..	33	..	..	..	6,140,173
Copper (Ingot and Matte) ..	"	2,391	..	2,778	..	917	7,954	..	14,040
Copper Ore ..	"	..	..	..	..	..	..	..	..
Diatomaceous Earth	"	(d) 4,366	1,113	59	..	5	..	..	5,543
Felspar ..	"	5,278	..	..	(e) 1,927	1,226	..	..	8,431
Fireclay ..	"	..	..	..	6,447	6,278	..	..	12,725
Gold ..	fine oz.	50,082	84,709	72,281	629	793,886	15,051	11,016	937,654
Graphite ..	cwt.	1,960	..	3,686	420	..	..	..	6,066
Gypsum ..	ton	64,070	22,895	..	106,955	20,282	..	..	214,202
Ironstone and Ore	"	9,238	..	1,342	2,145,529	..	..	..	2,156,109
Kaolin ..	"	..	6,245	..	(f) 2,666	581	3,076	..	12,571
Lead ..	"	(a)	..	29,590	21	..	7,710	..	(c) 37,330
Limestone Flux ..	"	112,771	3,118	..	341,339	..	29,147	..	486,375
Magnesite ..	"	57,751	..	..	987	73	..	..	58,811
Manganese Ore ..	"	1,887	..	..	180	..	..	..	1,776
Mica ..	cwt.	60	..	..	(g) 6,280	..	..	(h) 968	7,308
Molybdenite ..	"	60	..	20	..	..	..	..	80

(a) See letterpress preceding this table. (b) Excludes 3,076 cwt. of cadmium valued at £8,910 and 239 cwt. of cobalt oxide valued at £5,500, from ores of N.S.W. origin. (c) Incomplete. (d) Diatomite. (e) Includes chinastone. (f) Includes ball-clay. (g) Damourite. (h) Cut and crude.

MINERAL PRODUCTION: QUANTITIES, 1947—continued.

Mineral.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
Ochre and Other Pigment Clays	ton	1,130	..	..	..	(d) 1,037	395	570	3,132
Osmiridium	oz.	..	..	..	..	..	99	..	99
Phosphate	ton	228	..	..	5,080	..	..	..	5,317
Salt	..	..	(b)	..	155,074	..	..	..	(c) 155,074
Scheelite	cwt.	300	..	156	..	(e) 120	12,620	..	13,196
Shale (Oil)	ton	138,427	..	..	..	..	..	..	138,427
Silica	..	33,702	..	..	5,594	464	5,047	..	44,867
Silver	oz.	(d) 112,471	10,133	2,100,966	752	199,302	918,791	..	2,342,415
Silver-lead Ore, Concentrates, etc.	ton	212,410	..	..	..	22	..	..	212,432
Tantalite and Concentrates	cwt.	..	..	..	..	..	..	I	I
Tin and Tin Ore	ton	552	87	1,396	..	..	830	20	2,909
Wolfram	cwt.	460	..	1,261	..	..	4,020	2,020	7,761
Zinc and Concentrates	ton	249,420	..	25,216	..	..	18,513	..	293,149
Zircon - Rutile - Ilmanite-Monazite Concentrates	ton	27,579	..	10,254	..	..	..	..	37,773

(a) See letterpress preceding this table. (b) Not available. (c) Incomplete. (d) Includes tons of jarosite. (e) Concentrates.

The values of the minerals raised in each State in 1947 are shown in the following table:—

MINERAL PRODUCTION: VALUES, 1947.

(£.)

Mineral.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	N.T.	Australia.
Antimony and Ore	4,442	350	1,115	..	9,731	..	..	15,638
Arsenic and Ore	..	..	..	..	28,738	..	..	28,738
Asbestos	11,203	..	..	843	37,393	..	..	49,439
Barytes	3,468	..	..	18,406	..	..	..	21,874
Bismuth and Ore	3,456	..	400	..	..	305	..	4,161
Cadmium	(b)	..	..	..	..	15,470	(c)	15,470
Chalk, Talc, Soapstone, etc.	2,755	..	..	23,779	813	..	..	27,347
Coal—								
Black..	12,101,178	299,784	2,237,738	67,777	840,249	154,725	..	15,701,451
Brown	..	937,429	..	33	..	..	..	937,462
Copper (Ingot and Matte)	290,905	..	338,508	..	6,071	1,057,825	..	1,693,309
Copper Ore	(d) 4,618	4,577	148	..	50	..	..	9,393
Diatomaceous Earth	10,449	..	..	(e) 5,751	4,291	..	..	20,491
Felspar	..	..	..	4,030	6,064	..	..	10,094
Fireclay	630	..	..	..	..	..	..	630
Gems	539,008	911,681	777,924	6,770	7,575,574	161,986	118,563	10,091,506
Gold	980	..	1,062	..	548	..	..	2,587
Graphite	50,253	10,259	..	80,216	28,774	..	..	169,502
Gypsum	7,933	..	2,104	2,467,396	..	..	..	2,477,133
Ironstone and Ore	..	8,199	..	(f) 4,004	310	8,800	..	21,313
Kaolin	(b)	..	2,486,942	1,504	..	660,861	..	2,149,307
Lead	40,645	1,715	..	136,430	..	19,020	..	197,810
Limestone Flux	51,432	..	..	2,518	73	..	..	54,023
Magnetite	12,642	..	..	1,861	..	..	..	14,503
Manganese Ore	29	..	..	(g) 884	..	..	h 62,547	63,460
Mica	470	..	200	..	..	..	..	670
Molybdenite	..	..	..	..	..	..	..	..
Ochre and Other Pigment Clays	1,683	..	..	(i) 10,893	405	2,564	..	15,545
Opal	1,000	..	307	61,569	..	..	..	62,876
Osmiridium	..	..	..	..	..	2,700	..	2,700
Phosphate	114	..	..	6,361	..	..	..	6,475
Salt	(j)	..	..	310,148	..	..	..	(c) 310,148
Scheelite	6,847	..	3,166	..	(k) 3,840	240,006	..	253,889
Shale (Oil)	193,798	..	..	..	..	..	..	193,798
Silica	19,294	..	..	3,984	469	1,646	..	25,393
Silver	(b) 26,242	1,910	380,038	172	47,814	169,068	..	625,244
Silver-lead Ore, Concentrates, etc.	10,554,416	..	..	..	937	..	..	10,555,353
Tantalite and Concentrates	..	..	..	..	..	..	45	45
Tin and Tin Ore	246,423	25,307	390,833	..	5,565	353,945	4,698	1,025,961
Wolfram	9,184	..	28,283	..	..	82,928	41,020	161,415
Zinc and Concentrates	1,774,959	..	1,738,600	..	..	1,295,883	..	4,809,442
Zircon - Rutile - Ilmanite-Monazite Concentrates	276,101	..	152,880	..	..	..	..	428,990
Unenumerated	18,431	5,327	5,042	4,401	(l) 254,628	83	..	287,912
Total	126,264,088	2,206,029	8,515,299	3,109,382	8,862,127	4,224,750	229,437	153,542,407

(a) For Items excluded see letterpress below.

(b) See letterpress preceding this table.

(c) Incomplete. (d) Diatomite. (e) Includes chinastone. (f) Includes ball-clay.

(g) Damourite. (h) Cut and crude. (i) Includes jarosite. (j) Not available.

(k) Concentrates. (l) Includes pyritic ore, £18,767 and alunite, £41,212.

The figures in the foregoing table exclude certain commodities, such as stone for building and industrial uses, sand, gravel, brick and pottery clays, lime, cement and slates, which might be included under the generic term "mineral". Particulars of the production of some of these items are given in par. 6, Quarries, below. Items excluded, such as cement, carbide and sulphuric acid, are included in manufacturing production, and, in any case, only the raw material could properly be included in mineral production. The items excluded from the total for New South Wales in 1947 consisted of—lime, £90,867; building stone, £167,032; Portland cement, £1,588,693; coke, £2,675,423; road material, and gravel, £854,902; shell grit, £9,577; sulphur and sulphuric acid, £206,135; and brick and pottery clays, £285,815. Carbide, cement and limestone, £360,845 have been excluded from the Tasmanian figures.

4. **Value of Production, 1938, 1943 to 1947.**—The values of the minerals produced in each State during the years 1938 and 1943 to 1947 are given in the table hereunder:—

MINERAL PRODUCTION : VALUES.
(£.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
1938 ..	19,786,157	1,884,015	3,966,119	2,932,473	10,844,469	1,889,804	214,724	32,517,761
1943 ..	16,984,110	1,593,994	4,214,525	3,070,716	6,383,755	2,378,533	130,795	34,756,428
1944 ..	17,057,691	1,602,105	4,477,087	2,926,666	5,667,497	2,220,136	126,025	34,077,207
1945 ..	16,879,131	1,830,374	4,355,127	2,309,991	5,804,238	1,034,066	176,197	33,269,124
1946 ..	20,327,962	2,079,353	4,701,403	2,776,145	7,584,707	2,853,674	166,543	40,553,787
1947 ..	26,264,688	2,206,628	8,545,299	3,209,382	8,862,277	4,224,756	229,437	53,542,467

The value of mineral production in Australia reached its highest level in 1947 at £53,542,467 compared with £40,553,787 in 1946 and £32,517,761 in 1938. Although this marked increase was due to some extent to increased quantity output the main contributing factors were the increased prices paid in 1947 for coal, silver, lead and zinc.

Since 1938 the greatest increase has occurred in New South Wales, £15,478,531; followed by Queensland, £4,579,180; Tasmania, £2,334,952; Victoria, £322,613; and South Australia, £276,909. Because of the reduced output of gold in Western Australia, the value of minerals produced in that State was £1,982,192 lower in 1947 than in 1938.

5. **Total Production to end of 1947.**—In the next table will be found the estimated value of the total mineral production in each State up to the end of 1947. The items excluded from the preceding table are also omitted here, and consequently the total for New South Wales is £77,780,000 less than that published by the State Department of Mines. The principal items excluded from the table below are coke, £37,500,000; cement, £35,750,000; lime, £2,575,000; and considerable values for marble, slate, granite, chert, gravels, etc., which the State Department now includes in the returns for quarries.

MINERAL PRODUCTION : VALUES TO END OF 1947.
(£'000.)

Mineral.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
Gold ..	73,454	319,373	100,525	2,161	290,245	11,378	3,799	800,935
Silver and lead ..	188,127	285	19,066	386	2,663	13,975	67	224,569
Copper ..	18,156	217	35,050	33,313	1,822	30,633	261	119,452
Iron ..	9,500	16	537	42,313	37	97	..	52,500
Tin ..	19,577	1,265	14,072	..	1,689	21,279	705	58,587
Wolfram ..	426	19	1,485	..	7	1,037	812	3,786
Zinc ..	34,042	..	5,685	16	5	8,137	..	47,885
Coal ..	311,119	25,909	40,599	143	13,937	3,506	..	395,213
Other ..	13,187	1,226	4,188	11,901	2,414	4,277	428	37,621
Total ..	667,588	348,310	221,207	90,233	312,819	94,319	6,072	1,740,548

The "other" minerals in New South Wales include alunite, £229,000; antimony, £442,000; arsenic, £212,000; bismuth, £261,000; chrome, £143,000; diamonds, £151,000; magnesite, £842,000; molybdenite, £232,000; opal, £1,644,000; scheelite, £259,000; and shale oil, £3,815,000. In the Victorian returns antimony ore was responsible for £637,000. The value for coal in this State includes £8,760,000 for brown coal. Included in "other" in the Queensland production were opal, £189,000; gems, £657,000; bismuth, £147,000; cobalt, £158,000; molybdenite, £630,000; limestone flux, £903,000; and arsenic, £124,000. The chief items in South Australian "other" minerals were salt, £6,760,000; limestone flux, £904,000; gypsum, £1,866,000; phosphate, £194,000; and opal, £370,000. In Western Australia arsenic, £742,000; gypsum, £199,000; and asbestos, £242,000 were the principal items included with "other" minerals. In the Tasmanian returns osmiridium was responsible for £662,000, scheelite for £958,000 and limestone flux for £1,393,000.

6. Quarries.—Statistics giving details of the output of quarries were first published in Official Year Book No. 33, 1940. The details were collected following a resolution of the Conference of Australian Statisticians held in 1935.

The Conference defined a quarry, for the purpose of these statistics, as one in which four hands or more are employed, or in which power other than hand-power is used. The details given in the following table represent the output of quarries conforming to this definition, although in a few relatively unimportant cases details of other establishments have been included.

The authorities responsible for the collection of these statistics are the Government Statistician in New South Wales, Victoria, Queensland and Western Australia, and the Department of Mines in South Australia and Tasmania.

It should be noted that the inclusion of returns from certain small establishments tends to inflate the figures in the following tables, but there is possibly a compensating factor in that some quantities used by shires and municipalities in the repair of roads have not been returned to the collecting authority.

OUTPUT OF QUARRIES, 1947.

Description.	N.S.W.	Victoria. (a)	Q'land. (a)	S. Aust.	W. Aust. (a)	Tas. (b)	Australia.
QUANTITY (TONS).							
Building Stone ..	364,475	8,245	2,902	32,358	15,978	..	423,958
Macadam, Ballast etc. ..	4,125,490	967,669	480,897	1,725,222	229,010	..	7,528,288
Limestone (c) ..	(b)	395,130	33,838	10,862	107,637	..	(d) 547,467
Clays ..	1,462,659	53,318	..	212,130	543,990	..	2,272,097
Other ..	..	243,241	..	..	51,499	..	294,740

VALUE (£.).

Building Stone ..	167,032	25,197	1,414	27,317	16,277	..	237,237
Macadam, Ballast, etc. ..	854,962	456,666	157,215	449,412	143,951	..	2,062,206
Limestone (c) ..	(b)	121,620	24,215	1,688	18,404	..	(d) 165,927
Clays ..	285,815	12,803	..	26,516	70,310	..	395,444
Other ..	..	72,167	..	..	17,109	..	89,276
Total ..	21,307,809	688,453	182,844	504,933	266,051	..	22,950,090

(a) Year ended June, 1948. (b) Not available. (c) Limestone used as a flux and for the manufacture of lime and cement, omitting quantities used as building stone and as macadam, ballast, etc., which are already included under those headings. (d) Incomplete.

In the following table details of the total value of the output of quarries are given for each State for the years 1939 and 1943 to 1947 :—

OUTPUT OF QUARRIES.

(£.)

State.	1939.	1943.	1944.	1945.	1946.	1947.
New South Wales ..	1,446,927	1,152,814	(b)767,511	(b)860,121	1,056,325	1,307,809
Victoria(a) ..	552,888	403,237	421,050	517,354	680,619	688,453.
Queensland (a) ..	186,951	112,814	116,626	153,785	151,785	182,844
South Australia ..	469,606	230,422	216,796	250,874	364,469	504,933
Western Australia(a)	214,075	106,873	(b)105,075	(b)117,222	183,902	266,051
Tasmania ..	98,063	(c)	(c)	(c)	(c)	(c)
Total ..	2,968,510	2,008,160	1,627,058	1,899,356	2,437,100	2,950,090

(a) Year ended June following.

(b) Incomplete.

(c) Not available.

§ 2. Gold.*

1. **Discovery in Various States.**—The discovery of gold in payable quantities was an epoch-making event in Australian history, for, as one writer aptly phrases it, this event “precipitated Australia into nationhood”. A more or less detailed account of the finding of gold in the various States appears under this section in Official Year Books, Nos. 1 to 4.

2. **Production at Various Periods.**—(i) *Quantities.* The following table shows the quantity of gold produced in the several States and in Australia as a whole during each of the nine decennial periods from 1851 to 1940, and in single years from 1941 to 1948. Owing to the defective information in the earlier years the figures fall considerably short of the actual totals, for during the first stages of mining development large quantities of gold were taken out of Australia by successful miners who preferred to keep the amount of their wealth secret.

GOLD : QUANTITY PRODUCED.

('000 fine oz.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia
1851-60 ..	2,715	21,973	3	..	..	186	..	24,877
1861-70 ..	3,220	15,327	489	..	..	3	..	19,039
1871-80 ..	2,019	9,564	2,527	136	..	165	19	14,430
1881-90 ..	1,014	6,689	3,259	58	42	357	168	11,587
1891-1900 ..	2,432	7,040	5,648	52	5,252	550	214	21,188
1901-10 ..	2,253	7,095	5,512	73	17,784	604	111	33,432
1911-20 ..	1,145	3,067	2,203	55	10,671	202	23	17,426
1921-30 ..	204	593	434	10	4,557	43	2	5,843
1931-40 ..	569	1,052	1,021	53	8,474	130	84	11,383
1941 ..	88	150	109	2	1,109	20	19	1,497
1942 ..	77	101	95	2	848	19	12	1,154
1943 ..	64	56	63	1	546	17	4	751
1944 ..	63	54	51	1	466	17	5	657
1945 ..	43	62	63	..	469	13	7	657
1946 ..	32	87	63	1	617	15	10	825
1947 ..	50	85	72	1	704	15	11	938
1948 ..	57	69	70	2	665	13	15	891
Total, 1851-1948	16,045	73,064	21,742	447	52,204	2,369	704	166,575

The amount of gold raised in Australia in any one year attained its maximum in 1903, when Western Australia also reached its highest point. For the other States the years in which the greatest yields were obtained were as follows :—New South Wales, 1852 ; Victoria, 1856 ; Queensland, 1900 ; South Australia, 1904 ; and Tasmania, 1899.

* The values quoted in this section are in Australian currency throughout.

Owing to the exhaustion of the more easily worked deposits and increased costs due to deep mining the production of gold in Australia declined from 3,837,979 fine oz. in 1903 to 427,160 fine oz. in 1929, the lowest output since the discovery of the precious metal.

Increased activity in prospecting due to prevailing economic conditions resulted in some improvement in 1930, but the marked development between that year and 1939 received its impetus from the heavy depreciation of Australian currency in terms of gold. Oversea and local capital were attracted to the industry, and the employment of advanced geological methods and technical improvements brought many difficult or abandoned propositions into profit. The output of gold rose annually from 467,742 fine oz. in 1930 to 1,645,697 fine oz. in 1939. Following the outbreak of war in 1939, production fell very slightly in 1940, and rapidly thereafter, due to the diversion of manpower, until in 1944 it was only 656,867 fine oz. In 1945, the year in which hostilities in the 1939-45 War ceased, production showed practically no change, but in 1946 a marked increase of 167,267 fine oz. or 25 per cent. was recorded. In 1947, there was a further increase of 113,174 fine oz. or 13.7 per cent. to 937,654 fine oz., but in 1948 production declined by 46,849 fine oz. or 5.0 per cent. to 890,805 fine oz.

(ii) *Values.* In the next table the gold produced since 1851 is valued in Australian currency. For the years 1851 to 1918 and 1925 to 1930 the price used was £4 4s. 11¹/₁₁d. per fine oz. For the years 1919 to 1924 the price ranged between £5 12s. 6d. in 1920 and £4 8s. 6d. in 1923. The value applied for 1931 and to June, 1932 was the export parity calculated directly from London prices. Since then the average price paid by the mints in Australia has been used.

GOLD : VALUE OF PRODUCTION.
(£.)

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
1851-60..	11,530,583	93,337,052	14,565	..	..	788,564	..	105,670,764
1861-70..	13,676,103	65,106,264	2,076,494	..	..	12,174	..	80,871,035
1871-80..	8,576,654	40,625,188	10,733,048	579,668	..	700,048	79,022	61,293,028
1881-90..	4,306,541	28,413,792	13,843,081	246,668	178,473	1,514,921	713,345	49,216,821
1891-1900	10,332,120	29,004,152	23,989,359	210,931	22,308,524	2,338,336	906,988	89,999,110
1901-10..	9,569,492	30,136,686	23,412,395	310,080	75,540,415	2,566,170	473,871	142,009,109
1911-20..	4,988,377	13,354,217	9,876,677	238,808	46,808,351	873,302	(a) 100,652	76,240,384
1921-30..	940,746	2,721,309	1,976,715	47,564	20,462,957	193,383	(b) 11,545	26,354,869
1931-40..	5,115,397	9,444,570	9,118,903	450,330	74,391,204	1,164,492	780,790	100,480,686
1941 ..	941,244	1,600,016	1,161,621	17,908	11,852,452	212,710	201,599	15,990,550
1942 ..	807,436	1,060,910	994,211	13,930	8,865,806	101,835	126,035	12,060,166
1943 ..	666,491	590,541	656,657	5,123	5,710,663	180,209	40,880	7,850,864
1944 ..	657,163	538,305	538,176	5,662	4,890,384	174,888	57,803	6,901,381
1945 ..	461,303	661,430	676,712	2,970	5,012,225	139,573	76,811	7,031,024
1946 ..	344,497	936,262	675,164	6,760	6,610,075	165,334	105,376	8,873,468
1947 ..	539,008	911,681	777,924	6,770	7,575,574	161,986	118,503	10,091,506
1948 ..	618,444	738,092	749,565	21,912	7,156,909	138,889	163,482	9,587,293
Total, 1851-1948	74,071,799	320,110,467	101,274,270	2,182,784	297,403,012	11,517,264	3,962,762	810,522,358

(a) Period July, 1911 to June, 1920.

(b) Period July, 1920 to December, 1930.

Values per fine oz. in Australian currency assigned to the production of gold during recent years are: £9 14s. 5¹/₂d. in 1939, £10 13s. 1¹/₂d. in 1940, £10 13s. 8d. in 1941, £10 9s. 0¹/₂d. in 1942, £10 9s. 0d. in 1943, £10 10s. 1¹/₂d. in 1944, £10 13s. 11¹/₂d. in 1945 and £10 15s. 3d. in 1946, at which level it remained until 19th September, 1949. On that date, following the alteration in the rate of exchange, the value of gold rose to £15 9s. 10d. per fine oz. in terms of Australian currency. Further information regarding the price of gold is given in Chapter XVI, "Private Finance".

3. *Changes in Relative Positions of States as Gold Producers.*—The figures in the table showing the value of gold raised explain the very large increase in the population of Victoria during the period 1851 to 1861, when an average of over 40,000 persons reached the State each year. With the exception of 1889, when its output was exceeded by that of Queensland, Victoria maintained its position as the chief gold producer for a period of forty-seven years, until its production was surpassed by that of Western

Australia in 1898. From that year onward the proportion contributed by Western Australia has increased and in 1948 represented 75 per cent. of the entire yield of Australia. The proportion contributed by this State for the period 1851 to 1948 was 31 per cent. and by Victoria for the same period 44 per cent.

4. **Place of Australia in the World's Gold Production.**—The table below shows, in decennial periods from 1851 to 1940, the world's gold production (as ascertained from authoritative sources) and the share of Australia therein. The details of world production shown for the years 1941 to 1945 are possibly less complete than those shown for previous years because of censorship during the war. The figures recorded for these years represent recorded production only and therefore omit any production for those countries not reporting. Included in this latter group are the Soviet Union, and other producing countries of lesser importance.

GOLD : WORLD PRODUCTION.

Period.		World Production of Gold.	Gold Produced in Australia.	Percentage of Australian Production of Total.
		Fine oz.	Fine oz.	%
1851-60	.. ..	64,482,933	24,877,012	38.58
1861-70	.. ..	61,098,343	19,038,661	31.16
1871-80	.. ..	55,670,618	14,429,601	25.92
1881-90	.. ..	51,280,184	11,586,625	22.59
1891-1900	.. ..	101,647,521	21,187,662	20.84
1901-10	.. ..	182,891,525	33,432,069	18.28
1911-20	.. ..	206,511,263	17,426,466	8.44
1921-30	.. ..	183,805,900	5,843,052	3.18
1931-40	.. ..	315,508,597	11,383,487	3.61
1941	.. ..	(a) 34,000,000	1,496,698	4.40
1942	.. ..	(a) 31,900,000	1,153,787	3.62
1943	.. ..	(a) 24,800,000	751,279	3.03
1944	.. ..	(a) 22,100,000	656,867	2.97
1945	.. ..	(a) 21,300,000	657,213	3.09
1946	.. ..	21,600,000	824,480	3.82
1947	.. ..	21,800,000	937,654	4.30

(a) Recorded production only. (See letterpress above.)

The quantities of gold produced in the principal producing countries in each of the years 1938 and 1943 to 1947 are shown in the table hereunder.

GOLD : PRODUCTION IN PRINCIPAL COUNTRIES. (¹000 fine oz.)

Country.	1938.	1943.	1944.	1945.	1946.	1947.
Union of South Africa	12,161	12,804	12,280	12,225	11,927	11,198
Canada	4,725	3,651	2,923	2,697	2,832	3,070
U.S.S.R. (Russia) ..	5,236	(a)	(a)	(a)	(a)	(a)
United States of America (b)	4,145	(b) 1,318	(b) 1,022	(b) 1,115	(b) 1,462	2,321
Australia	1,592	751	657	657	824	938
Philippine Islands ..	903	14	(a)	13	(a)	64
Korea	948	412	119	96	(a)	(a)
Mexico	924	632	509	524	430	465
Japan, including						
Formosa	852	487	357	65	43	69
Rhodesia	815	657	593	568	551	523

(a) Not available.

(b) Refinery production.

The next table shows for the decennium 1938 to 1947 the average yearly production in ten of the principal gold-producing countries, of which five are within the British Commonwealth.

**GOLD : AVERAGE ANNUAL PRODUCTION IN PRINCIPAL COUNTRIES,
1938 TO 1947.**
(Fine oz.)

Country.	Quantity.	Country.	Quantity.
British Countries—		Foreign Countries—	
Union of South Africa ..	12,799,999	U.S.S.R. (Russia) ..	(a) 5,433,333
Canada	4,045,578	United States of America	2,901,891
Australia	1,135,970	Mexico	677,485
Gold Coast	678,502	Belgian Congo	438,400
Rhodesia, North and South	689,658	Colombia	542,120

(a) Average three years 1938 to 1940.

5. **Employment in Gold-mining.**—The number of persons engaged in gold-mining in each State at various intervals since 1901 is shown in the following table. The figures include prospectors, etc., so far as they are ascertainable, and include those who may not have worked during the whole of the year.

GOLD-MINING : PERSONS EMPLOYED.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Total.
1901 ..	12,064	27,387	9,438	(a) 1,000	19,771	1,112	(a) 200	70,972
1903(b) ..	11,247	25,208	9,229	(a) 1,000	20,716	973	(a) 200	68,573
1913 ..	3,570	11,931	3,123	800	13,445	481	175	33,525
1923 ..	1,141	2,982	603	32	5,555	119	30	10,462
1933 ..	6,913	6,126	4,161	231	9,900	229	95	27,655
1938 ..	3,764	6,315	3,378	158	15,374	141	267	29,397
1943 ..	771	719	1,297	29	5,079	19	40	7,954
1944 ..	512	550	1,243	28	4,614	23	45	7,015
1945 ..	509	643	1,256	16	4,818	15	46	7,303
1946 ..	772	1,282	1,651	38	6,961	13	106	10,823
1947 ..	795	1,135	1,834	50	7,649	14	176	11,653

(a) Estimated. (b) Year of maximum production for Australia.

Owing to the exhaustion of the more easily worked deposits and increased costs due to deep mining, the number employed in gold-mining had dwindled to the comparatively small figure of 6,108 in 1929. Stimulated by the enhanced price of gold, employment in the industry rose more than five-fold to 33,113 in 1935, but thereafter the numbers employed declined each year to 7,015 in 1944. Following the cessation of hostilities and a relaxation of manpower control, the numbers rose to 7,303 in 1945, to 10,823 in 1946 and to 11,653 in 1947.

6. **Tax on Gold.**—(i) *General.* The Commonwealth Government imposed a tax on gold produced in Australia or in any Territory under its jurisdiction and delivered to the Commonwealth Bank on or after 15th September, 1939. The rate of tax was fixed at 50 per cent. of the price payable by the Bank in excess of £A9 per fine oz.

The tax on gold yielded £1,214,621 during 1939-40; £1,452,260 during 1940-41; £1,030,425 in 1941-42; £524,694 in 1942-43; £317,720 in 1943-44; £342,457 in 1944-45; £383,552 in 1945-46 and £556,435 in 1946-47. This tax was suspended as from 20th September, 1947 by the Gold Tax Suspension Act 1947.

(ii) *Development of Gold Mining Industry.* Assistance amounting to £150,000 was given to the gold-mining industry, through the medium of the States, during 1940-41. In addition, an amount approximating £150,000 was paid during 1942 and subsequent years for the maintenance of those mines where, under manpower control, miners were transferred to other activities more directly associated with the war effort.

The suspension of the tax on gold referred to above was designed to assist the gold-mining industry in meeting higher costs and to encourage a greater output.

7. **Bounty on Production.**—A reference to the bounty provided by the Commonwealth on gold production in Australia appears in Official Year Book No. 32, p. 579.

§ 3. Silver, Lead and Zinc.

1. **Production.**—(i) *General.* The values of the production of silver, silver-lead ore and lead from the various States during each of the years 1938 and 1943 to 1947 are shown in the following table:—

SILVER AND LEAD : VALUE OF PRODUCTION.

(£.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Australia.
1938 ..	3,520,465	647	926,614	70	29,477	267,773	..	4,745,046
1943 ..	3,752,672	2,278	230,837	62	16,475	333,958	..	4,335,382
1944 ..	4,068,935	1,280	14,733	309	15,807	313,618	..	4,414,682
1945 ..	4,625,665	1,622	17,788	601	22,757	259,560	..	4,927,993
1946 ..	6,999,543	2,687	836,879	224	43,860	527,937	..	8,411,130
1947 ..	10,580,658	1,910	2,866,980	1,676	48,751	829,929	..	14,329,904

(ii) *New South Wales.* (a) *General.* The figures for New South Wales for 1947 include silver to the value of £26,242 and silver-lead ore and concentrates valued at £10,554,416. Since the Sulphide Corporation Ltd. ceased smelting operations in 1922 the silver (metal) has been obtained chiefly in the refining of gold and copper ores, and there has been no production of lead (pig). It may be noted here that the bulk of the carbonate and siliceous ore from the Broken Hill field is sent for treatment to Port Pirie in South Australia, while the remainder of the ore is concentrated on the field and then dispatched to Port Pirie for refining. The output of silver-lead ores and concentrates in 1947 decreased by 3,518 tons compared with the previous year, but owing to increased prices the value rose by more than £3,500,000.

It must be understood that the totals for New South Wales in the table above represent the net value of the product (excluding zinc) of the silver-lead mines of the State. In explanation of the values thus given, it may be noted that, as previously mentioned, the metallic contents of the larger portion of the output from the silver-lead mines in the State are extracted outside New South Wales, and the Mines Department considers, therefore, that the State should not take full credit for the finished product. The real importance of the State as a producer of silver, lead and zinc is thus to some extent understated.

(b) *Broken Hill.* Broken Hill, in New South Wales, is the chief centre of silver production in Australia. The value of the output of the principal mines in the Broken Hill field totalled £207.3 million to the end of 1946. In 1947 the value of output was £12,389,400 and in 1948, £17,927,995. A description of the silver-bearing area in this district is given in earlier issues of the Official Year Book. (See No. 4, p. 506.)

(c) *Other Areas.* Silver is found in various other localities in New South Wales, the most important being at Captain's Flat where Lake George Mines produced concentrates estimated to contain 173,895 oz. of silver, 7.944 tons of lead and 13,399 tons of zinc in 1945; 253,870 oz. of silver, 10,355 tons of lead, and 17,891 tons of zinc in 1946; 202,102 oz. of silver, 8,453 tons of lead, and 14,497 tons of zinc in 1947; and 135,813 oz. of silver, 5,973 tons of lead, and 10,540 tons of zinc in 1948. Production on a small scale recommenced during 1946 at Yerranderie, and amounted in that year to 111 tons of ore, containing 11,100 oz. of silver and 27 tons of lead; in 1947, 150 tons of ore, containing 1,506 oz. of silver and 35 tons of lead; and in 1948, 173 tons of ore, containing 16,075 oz. of silver and 43 tons of lead. In addition, 6,902 oz. of silver were obtained in 1948 in conjunction with the gold-copper ores at Cobar.

(iii) *Victoria.* The silver produced in 1947 amounted to 10,133 oz., valued at £1,910 and was obtained in the refining of gold at the Melbourne Mint.

(iv) *Queensland.* The production of silver decreased from 3,055,435 oz. in 1942 to 112,710 oz. in 1945, whilst lead production dropped from 33,512 tons in 1942 to nil in 1945. This decrease was due to suspension of silver-lead and zinc operations by Mount Isa Mines Ltd. during the time it was engaged in producing copper. Mining for copper

ceased at Mount Isa in 1946 and the production of silver, lead and zinc was resumed. The production of silver rose from 980,538 fine oz. in 1946 to 2,100,966 fine oz. in 1947 whilst the output of lead rose from 12,754 tons to 29,590 tons and zinc from 11,361 tons to 25,216 tons.

(v) *South Australia.* In 1947, production of silver amounted to 752 oz. valued at £172 compared with 607 fine oz. valued at £151 in 1946.

(vi) *Western Australia.* The quantity of silver obtained as a by-product and exported in 1947 was 199,302 fine oz. valued at £47,814 compared with 171,452 fine oz. valued at £42,792 in 1946.

(vii) *Tasmania.* The silver produced in 1947 amounted to 918,791 fine oz., valued at £169,068, and the lead to 7,719 tons, valued at £660,861, produced in the Western Division of the State. About 146,776 oz. of the total silver output were contained in silver-lead, 27,892 oz. in the blister copper produced by the Mount Lyell Co., and 744,123 oz. in zinc lead ore.

(viii) *Northern Territory.* A rich deposit of silver-lead and copper ore was located in 1930 at the Jervois Range about 200 miles east of Alice Springs. Development is hindered, however, by transport difficulties and lack of permanent water. Rich sulphides have been found at Barrow Creek. Production during the past ten years has been very intermittent and not very great in the years when any output was recorded.

2. **Production, Sales and Stocks of Refined Silver, 1939 and 1944 to 1948.**—The following table sets out as fully as possible the total production and distribution of refined silver in Australia. It is based on the data published by the Australian Mines and Metals Association and shows the stocks of refined silver in Australia, production and sales (locally and overseas) during the years 1939 and 1944 to 1948. Comparable figures for the year 1938 are not available.

REFINED SILVER : PRODUCTION, SALES AND STOCKS, AUSTRALIA.
(‘000 fine oz.)

Particulars.	1939.	1944.	1945.	1946.	1947.	1948.
Stock from previous year ..	122	437	414	465	241	445
Production for year ..	9,552	7,176	7,464	6,183	6,658	6,212
Total Supply ..	9,674	7,613	7,878	6,648	6,899	6,657
Sold to Australian consumers	1,794	7,199	7,413	6,407	3,560	1,375
Exported or sold for export	7,518	..	..	..	2,894	4,998
Stock on hand at end of year	362	414	465	241	445	284
Total Disposals and Stocks	9,674	7,613	7,878	6,648	6,899	6,657
Silver Contents of Ores and Concentrates Produced ..	15,320	9,366	8,077	9,073	9,527	10,058

3. **World Production.**—The world's production of silver during the years 1938 and 1943 to 1947 is estimated to have been as follows :—

SILVER : WORLD PRODUCTION.
(‘000 fine oz.)

1938.	1943.(a)	1944.(a)	1945.(a)	1946.(a)	1947.(a)
267,765	195,010	173,060	151,173	131,119	159,000

(a) Output of reporting countries.

The world's production of silver during 1938 amounted to about 268 million fine oz., of which Australia contributed 13.9 million fine oz., or 5.2 per cent. The production for Australia includes an estimate of the silver contents of the ores, bullion and concentrates exported.

The estimated yields of the principal silver-producing countries in 1947 (or the latest year available) were as follows:—

SILVER: PRODUCTION IN PRINCIPAL COUNTRIES, 1947.

('000 fine oz.)

Country.	Production.	Country.	Production.
Mexico	49,198	British India (including Burma)	(a) 6,175
United States of America ..	36,053	Belgian Congo	4,057
Canada	12,504	Yugoslavia	(b) 2,570
Peru	10,783	Argentina	2,435
Australia	9,527	Japan	2,272
U.S.S.R. (Russia)	(a) 7,000	Union of South Africa ..	1,147
Germany	(b) 7,000	Newfoundland	956
Bolivia	6,237	Chile	747

(a) Year 1940.

(b) Year 1939.

4. **Production of Lead in Australia.**—For reasons already mentioned, difficulties arise when an attempt is made to show the production of lead by States. This is due to the fact that production is largely recorded in terms other than metal. The chief sources of production are New South Wales, Queensland and Tasmania.

The details of production, sales, and stocks given in the table following have been compiled from data supplied by the Australian Mines and Metals Association. Comparable figures for the year 1938 are not available.

REFINED LEAD: PRODUCTION, SALES AND STOCKS, AUSTRALIA.

(Tons.)

Particulars.	1939.	1944.	1945.	1946.	1947.	1948.
Stocks from previous year (a)	10,290	73,720	18,959	17,418	24,726	(b) 5,028
Production for year ..	199,437	154,547	155,852	137,459	158,548	159,497
Total Supply ..	209,727	228,267	174,811	154,877	183,274	164,525
Sold to Australian consumers	32,217	29,853	30,168	42,040	33,242	34,774
Exported or sold for export	164,684	179,455	127,195	88,111	138,378	123,890
Stock on hand at end of year a	12,826	18,959	17,418	24,726	11,654	(b) 5,861
Total Disposals and Stocks	209,727	228,267	174,811	154,877	183,274	164,525
Lead Contents of Ores and Concentrates Produced ..	280,003	189,485	164,741	184,314	196,623	216,955

(a) Physical stocks.

(b) Unsold stocks.

5. **Prices of Silver, Lead and Zinc.**—In view of the close association in Australia, particularly in New South Wales, of ores containing these metals, the average prices in sterling of each metal on the London Metal Exchange during the years shown have been incorporated in the table hereunder. During 1942, 1943 and 1944, prices remained unchanged at the 1941 levels.

PRICES OF SILVER, LEAD AND SPELTER, LONDON METAL EXCHANGE.
(£ s. d. Stg.).

Metal.	1938.	1941.	1945.	1946.	1947.	1948.
Silver per fine oz.	0 1 9.06	0 2 1.31	0 2 6.51	0 4 0.7	0 3 8.4	0 3 9.0
Lead .. per ton	15 6 6	25 0 0	27 15 11	48 1 7	85 1 7	95 10 0
Spelter „ „	14 1 7	25 15 0	28 16 7	43 1 11	70 0 0	80 0 9

(a) Maximum price as fixed by the British Ministry of Supply.

The prices of lead and zinc in Australia were fixed by Prices Regulation at £A22 per ton in February, 1940, and continued at that level up to December, 1948. In January, 1949, the local price of lead was increased to £A35 per ton and zinc to £A40 per ton. The price of silver, however, was not so fixed and the following prices per fine oz. in Australia represent the export parity calculated directly from London prices:—2s. 3.8d. in 1939; 2s. 6.1d. in 1940; 2s. 7.5d. in the years 1941 to 1944; 3s. 2.2d in 1945; 5s. 0.8d. in 1946; 4s. 7.6d. in 1947, and 4s. 8.4d. in 1948.

6. **Employment in Silver, Lead and Zinc-mining.**—The average number of persons employed in mining for these metals during each of the years 1938 and 1943 to 1947 is given below:—

SILVER, LEAD AND ZINC-MINING : PERSONS EMPLOYED.

Year.	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Terr.	Australia.
1938 ..	5,612	530	..	4	421	3	6,570
1943 ..	3,982	239	..	2	466	..	4,689
1944 ..	3,896	..	..	..	445	..	4,341
1945 ..	3,929	34	..	..	417	..	4,380
1946 ..	4,713	1,003	2	5	453	..	6,176
1947 ..	5,331	994	12	..	523	2	6,862

§ 4. Copper.

1. **Production.**—Copper is widely distributed throughout Australia. South Australia and New South Wales were once large producers but the output of these States is much less than it was in earlier years. The chief sources of production are now centred in Queensland and Tasmania.

The values of the local production as reported and credited to the mineral industry for the years 1938 and 1943 to 1947 are shown hereunder. Quantities for Australia as a whole, as returned by the several State Mines Departments, are appended at the foot of the table :—

COPPER : PRODUCTION.

State.	1938.	1943.	1944.	1945.	1946.	1947.
	£	£	£	£	£	£
New South Wales ..	87,905	379,800	309,900	305,000	344,682	290,005
Queensland ..	203,967	1,111,049	1,644,747	1,500,662	648,122	338,508
South Australia ..	15,333	10,100	12,115	11,674	..	..
Western Australia ..	1,275	33	(a) 367	364	105	6,071
Tasmania ..	580,238	691,199	633,188	463,294	716,212	1,057,825
Northern Territory ..	4,362	2,393	1,878	3,811	6,282	..
Australia ..	893,080	2,194,574	(a) 2,602,195	2,284,805	1,715,403	1,693,309
Ingot, Matte, etc. ..	Tons. 18,751	Tons. 25,894	Tons. (a) 29,365	Tons. 25,850	Tons. 19,160	Tons. 14,040
Ore and Concentrates	935					

(a) Incomplete.

In the following table, details of the production, sales and stocks of refined copper, as compiled by the Australian Mines and Metals Association, are given for the years indicated. Comparable figures for the year 1938 are not available :—

REFINED COPPER : PRODUCTION, SALES AND STOCKS, AUSTRALIA.
(Tons.)

Particulars.	1939.	1943.	1944.	1945.	1946.	1947.	1948.
Stocks from previous year ..	1,342	972	587	800	2,611	1,313	409
Production for year ..	17,867	20,457	19,898	20,498	22,659	19,303	11,389
Total	19,209	21,429	20,485	21,298	25,270	20,616	11,798
Sold to Australian consumers	18,808	20,842	19,685	18,687	22,957	20,207	11,407
Exported or sold for export	100	..	..	..	1,000	..	..
Stocks on hand at end of year	301	587	800	2,611	1,313	409	391
Total	19,209	21,429	20,485	21,298	25,270	20,616	11,798

2. Sources of Production.—(i) *New South Wales.* The copper content of ores and concentrates produced in New South Wales in 1947 amounted to 2,391 tons.

(ii) *Queensland.* In 1947 the yield of metallic copper in this State amounted to 2,778 tons compared with 6,481 tons in 1946 and 15,007 tons in 1945.

The decrease in recent years is due to the suspension at Mount Isa of copper production and the resumption thereof of silver-lead and zinc operations. Copper production was begun at Mount Isa as a war-time expedient. The chief producing area in 1947 was Mount Morgan, which produced 2,570 tons during the year.

(iii) *South Australia.* Deposits of copper are found over a large portion of South Australia, and its total production to date exceeds that of any other State notwithstanding that output has diminished to negligible dimensions since the exhaustion of the ore reserves on the principal copper fields. No production was recorded in 1946 or 1947.

(iv) *Western Australia.* During 1947, the quantity of copper reported was 917 tons, valued at £6,071, compared with 74 tons for £105 in 1946.

(v) *Tasmania.* The quantity of copper produced in Tasmania during 1947 was 7,954 tons, valued at £1,057,825, the Mount Lyell Mining and Railway Co. Ltd. accounting for the greater part of the production. This company treated 34,418 tons of ore and concentrates and produced blister copper, containing copper (7,668 tons), silver (28,291 oz.) and gold (5,401 oz.), the whole being valued at £1,001,054.

(vi) *Northern Territory.* Copper has been found at various places in the Territory. In 1947 there was no production, but during 1946 there were 279 tons produced compared with 96 tons in 1939.

3. **World Production of Copper.**—The world's estimated production of copper during the years 1938 and 1943 to 1947 is shown below. The figures have been obtained from authoritative sources, but some countries did not report their production during the war years and in these cases estimates have been used.

COPPER : WORLD PRODUCTION.

(Tons of 2,240 lb.)

1938.	1943.	1944.	1945.	1946.	1947.
2,020,000	2,700,000	2,500,000	2,120,000	1,790,000	2,170,000

The yields from the principal copper-producing countries reporting in 1947 were as follows:—

COPPER : PRODUCTION IN PRINCIPAL COUNTRIES, 1947.

(Tons of 2,240 lb.)

Country.	Production.	Country.	Production.
United States of America ..	756,000	Germany	(a) 30,000
Chile	420,000	Peru	22,000
Canada	202,000	Japan	21,500
Northern Rhodesia ..	192,500	Australia	14,040
Belgian Congo	148,000	Turkey	10,000
U.S.S.R. (Russia) ..	140,000	Belgium	8,000
Mexico	62,500	Spain	6,000
Yugoslavia	30,000	Bolivia	6,000

(a) Year 1939.

During 1947 the share of the United States of America in the world's copper production amounted to nearly 35 per cent. while the Australian proportion was less than 1 per cent.

4. **Prices.**—At the outbreak of war in 1939, the price of copper in Australia and the United Kingdom was fixed by Regulation. Details of the average price for the years shown are given in terms of Australian currency and sterling in the following table :—

AVERAGE PRICE PER TON OF COPPER IN AUSTRALIA AND UNITED KINGDOM.

(£ s. d.)

Country.	December, 1939.	1944.	1945.	1946.	1947.	1948.
Australia — in Aust. currency	63 17 6	105 0 0	100 0 0	95 0 0	123 5 9	140 0 0
United Kingdom in Sterling ..	62 0 0	62 0 0	62 0 0	77 4 0	130 12 4	134 0 0

5. **Employment in Copper-mining.**—The number of persons employed in copper-mining during each of the years 1938 and 1943 to 1947 was as follows :—

COPPER-MINING : PERSONS EMPLOYED.

Year.	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Australia.
1938	13	213	67	4	1,015	5	1,317
1943	260	864	36	1	821	1	1,983
1944	210	919	37	..	799	4	1,969
1945	145	814	3	2	738	5	1,707
1946	134	59	11	1	709	9	923
1947	184	48	..	2	733	15	982

In 1917 over 9,000 persons were engaged in copper-mining.

§ 5. Tin.

1. **Production.**—The values of the production of tin as reported to the Mines Departments in each of the States during the years 1938 and 1943 to 1947 are given in the following table. A separate line is appended showing the production of refined tin as recorded by the Australian Mines and Metals Association for the years indicated.

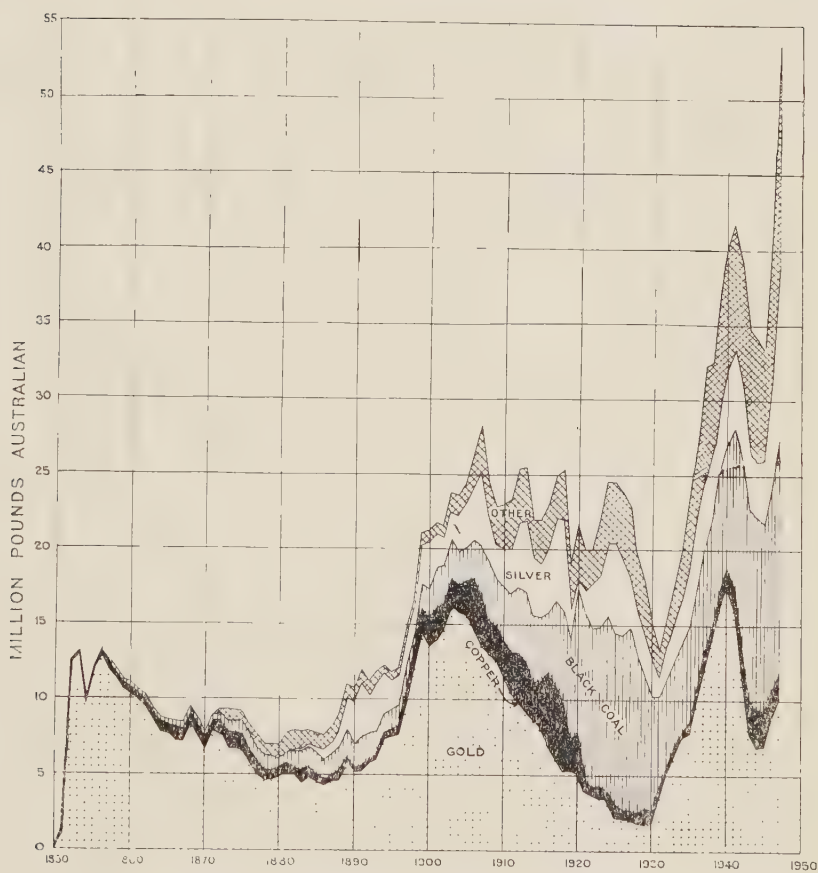
TIN : PRODUCTION.

State.	1938.	1943.	1944.	1945.	1946.	1947.
	£	£	£	£	£	£
New South Wales ..	286,768	403,320	309,860	291,788	257,153	246,423
Victoria	28,650	14,162	12,835	9,869	14,917	25,397
Queensland.. ..	141,547	167,176	275,185	207,948	220,901	390,833
South Australia ..	..	10	..	..	..	..
Western Australia ..	7,421	2,315	(b) 2,351	4,370	5,838	5,565
Tasmania	244,037	246,218	235,612	240,369	240,584	353,045
Northern Territory ..	3,205	5,594	2,086	5,026	3,228	4,698
Total	711,628	838,795	b 837,929	759,370	742,621	1,025,961
Refined Tin ..	Tons. (a)	Tons. 2,565	Tons. 2,442	Tons. 2,359	Tons. 2,225	Tons. 2,371

(a) Not available.

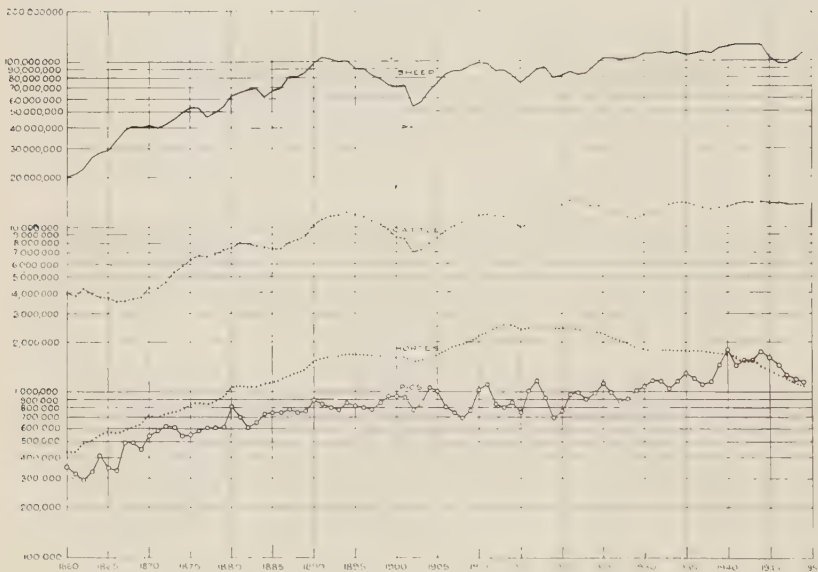
(b) Incomplete.

VALUE OF PRINCIPAL MINERALS PRODUCED—AUSTRALIA, 1850 TO 1947.



EXPLANATION.—The upper curve represents the total value of mineral production while the vertical distances between the curves represent the value of production of each mineral.

LIVE STOCK—AUSTRALIA, 1860 TO 1949.



(See page 893.)

EXPLANATION.—This is a ratio graph, the vertical scale being logarithmic and the curves rise and fall according to the rate of increase or decrease. Actual numbers are indicated by the scale at the side of the graph.

2. Sources of Production.—(i) *New South Wales*. Production of tin in 1947 was stated at 552 tons of ore, valued at £246,423, compared with 674 tons, valued at £257,153, in 1946. A large proportion of the output in this State is obtained in normal years by dredging, principally in the New England district.

(ii) *Victoria*. The production of tin in this State is obtained chiefly by dredging in the Beechworth district and by mining in the Toora district in Gippsland. The production in 1947 amounted to 87 tons of concentrates, valued at £25,397, compared with 64 tons, valued at £14,917, in 1946.

(iii) *Queensland*. The chief producing districts in Queensland during 1947 were Herberton, 1,283 tons, valued at £359,325; Cooktown, 28 tons, £8,588; Stanthorpe, 27 tons, £8,058; Chillagoe, 11 tons, £2,940; Kangaroo Hills, 31 tons, £7,794; and Ingham, 15 tons, £4,410. The total production in 1947 amounted to 1,396 tons, valued at £390,833 compared with 977 tons, valued at £220,901 in 1946. It is interesting to compare these production figures with those recorded in the early years of this century when the output ranged between 2,000 and 5,000 tons per annum.

(iv) *Western Australia*. The quantity of tin reported in this State in 1947 amounted to 24 tons, valued at £5,565, and was obtained mainly in the Pilbara and Greenbushes fields.

(v) *Tasmania*. For 1947 the output amounted to 830 tons of tin, valued at £353,045, an increase of 129 tons on the output of the previous year.

(vi) *Northern Territory*. The production for 1947 amounted to 20 tons of concentrates valued at £4,698, compared with 15 tons of concentrates valued at £3,228 produced during 1946.

3. World Production.—The world's production of tin during each of the years 1938 and 1942 to 1947 was as follows:—

TIN : WORLD PRODUCTION.
(Tons of 2,240 lb.)

1938.	1942.	1943.	1944.	1945.	1946.	1947.
148,600	119,700	138,400	101,100	90,000	88,600	114,500

The production of tin reached its maximum in 1941 when 241,400 tons were recorded. The following are the chief producing countries of the world:—Bolivia, Malaya, Indonesia, Belgian Congo and Nigeria. Normally these countries produce about three-quarters of the total production.

The yields from the principal producing countries in 1947 were as follows:—

TIN : PRODUCTION IN PRINCIPAL COUNTRIES, 1947.
(Tons of 2,240 lb.)

Country.	Production.	Country.	Production.
Bolivia	33,259	Burma	1,818
Federation of Malaya	27,026	Siam	1,401
Indonesia	15,915	United Kingdom	898
Belgian Congo	14,897	Japan	600
Nigeria	9,139	Spain and Portugal	503
China	(a) 4,000	Union of South Africa	483
Australia	2,445	Argentina	468

(a) Estimated.

The world's tin production in 1947 was estimated at 114,500 tons of which Australia's share was about 2.1 per cent.

4. Prices.—At the outbreak of war in September, 1939, the price of tin in Australia and London was fixed by Regulation. Details of the movement in average prices for the years shown are given in terms of Australian currency and sterling in the following table :—

AVERAGE PRICE PER TON OF TIN IN AUSTRALIA AND UNITED KINGDOM.
(£ s. d.)

Country.	December, 1939.	1944.	1945.	1946.	1947.	1948.
Australia—in Aust. currency	299 0 0	376 0 0	376 0 0	376 0 0	438 15 0	520 0 0
United Kingdom —in sterling..	271 0 0	300 0 0	300 0 0	336 2 10	425 18 7	548 1 11

5. Employment in Tin-mining.—The number of persons employed in tin-mining during the years 1938 and 1943 to 1947 was as follows :—

TIN-MINING : PERSONS EMPLOYED.

Year.	N.S.W.	Victoria. (a)	Q'land.	W. Aust.	Tas.	Nor. Terr.	Australia.
1938	1,440	5	1,263	73	1,123	15	3,919
1943	1,175	4	599	7	847 (b)	45 (c)	2,679
1944	927	26	532	5	834 (b)	46	2,370
1945	814	4	465	13	736 (b)	48	2,080
1946	778	..	462	10	695	49	1,994
1947	523	..	528	9	627	52	1,739

(a) The tin produced in Victoria was raised by a dredging company operating primarily for gold.
(b) Includes some engaged in mining for tantalite. (c) Includes two miners in South Australia.

§ 6. Zinc.

1. Production : States.—(i) *New South Wales.* The production of zinciferous concentrates is confined chiefly to the Broken Hill district of New South Wales, where zincblende forms one of the chief constituents in the enormous deposits of sulphide ores. The re-opening in 1937 of the mine at Captain's Flat by the Lake George Mines, Ltd. was an important development. Production commenced in 1939. Details of the zinc contents of ores and concentrates produced at this mine are given in the table below.

As the metallic contents of the bulk of the concentrates, etc., produced from these fields are extracted outside New South Wales, the mineral industry of that State is not credited by the Mines Department with the value of the finished product. During 1947 the zinc concentrates produced amounted to 240,420 tons, valued at £1,774,959. Portion of the zinc concentrates produced is treated at Risdon in Tasmania and the balance is exported, mainly to the United Kingdom and the United States of America. The production from these concentrates treated by the Electrolytic Zinc Company of Australia Ltd. at Risdon amounted to 52,241 tons of zinc, 153.82 tons of cadmium and 11.9 tons of cobalt oxide in 1947. This is referred to in the Tasmanian production below.

(ii) *Queensland.* The production of zinc in the Cloncurry district of Queensland during 1943 was 5,077 tons, valued at £76,158, compared with 21,035 tons, valued at £394,412 in 1942 and 4,411 tons, valued at £68,863, obtained in 1935. The metal was produced by the Mount Isa Mines Ltd. and was exported overseas as concentrates. There was no production in 1944 and 1945 but operations were resumed in 1946, the output reaching 11,361 tons in that year and increasing in 1947 to 25,216 tons valued at £1,738,600.

(iii) *South Australia.* Zinc is known to exist in various localities in South Australia, but there has been no production during recent years.

(iv) *Tasmania.* The production of zinc from Tasmanian ores was suspended from 1931 to 1935. Developmental work on the Mount Read-Rosebery district was continued during that period and production commenced in 1936. In 1937—the first full year's operations since the inception of milling at Rosebery—23,481 tons, valued at £525,824, were obtained. In 1947, 18,513 tons of zinc, valued at £1,295,883, were obtained from Tasmanian ores, as well as 35 tons of cadmium valued at £15,470 and 4 cwt. of cobalt oxide valued at £83.

In addition to the foregoing the Electrolytic Zinc Company of Australia Ltd. at Risdon operated on raw materials obtained from Broken Hill in New South Wales. Production from this source during 1947 amounted to 52,241 tons of slab zinc, valued at £1,201,543, 153.82 tons of cadmium, valued at £68,910 and 11.93 tons of cobalt oxide, valued at £5,500.

2. **Production : Australia.**—The details furnished above do not adequately convey the potentialities of Australia as a producer of zinc. A better indication is given in the following table which shows the estimated zinc contents of ores and concentrates produced in Australia according to data compiled by the Australian Mines and Metals Association. Comparable figures for 1938 are not available.

ZINC CONTENTS OF ORES AND CONCENTRATES PRODUCED.
(Tons.)

Year.	New South Wales.			Queensland.	Tasmania.	Australia.
	Broken Hill.	Lake George.	Total.	Mt. Isa.	Rosebery.	Total.
1939..	145,207	11,850	157,057	29,092	31,107	217,256
1944..	128,384	19,657	148,041	..	26,317	174,358
1945..	118,566	11,893	130,459	..	19,854	150,313
1946..	122,776	15,187	137,963	11,269	22,678	171,910
1947..	120,993	12,667	133,660	24,904	23,604	182,258
1948..	136,144	9,445	145,589	21,578	23,151	(a) 190,469

(a) Including 151 tons from other sources.

In the next table details are given of the quantity of refined zinc produced in Australia, the quantity sold and stocks held for the years 1939 and 1944 to 1948, according to data compiled by the Australian Mines and Metals Association. Comparable figures for 1938 are not available.

REFINED ZINC : PRODUCTION, SALES AND STOCKS, AUSTRALIA.
(Tons.)

Particulars.	1939.	1944.	1945.	1946.	1947.	1948.
Stocks from previous year ..	3,225	3,314	11,295	4,786	531	3,685
Production for year ..	71,220	78,716	83,773	76,316	69,421	81,312
Total ..	74,445	82,030	95,068	81,102	69,952	84,997
Sold to Australian consumers	31,088	19,828	26,639	35,984	47,442	42,018
Exported or sold for export..	43,137	50,997	63,643	44,587	18,825	37,100
Stocks on hand at end of year	220	11,295	4,786	531	3,685	5,879
Total ..	74,445	82,030	95,068	81,102	69,952	84,907

3. **World Production.**—The world's production of zinc ore in terms of metal during the years 1939 and 1942 to 1947 was as follows :—

ZINC : WORLD PRODUCTION.

(Tons of 2,240 lb.)

1939.	1942.	1943.	1944.	1945.	1946.	1947.
1,920,000	2,160,000	2,110,000	1,964,000	1,751,000	1,733,000	1,848,000

Particulars of the production of zinc ore, expressed in terms of metal, are given in the following table for the principal producing countries for 1947.

ZINC : PRODUCTION IN PRINCIPAL COUNTRIES, 1947.

(Tons of 2,240 lb.)

Country.	Production.	Country.	Production.
United States of America ..	569,293	Belgian Congo ..	44,475
Mexico	192,721	Newfoundland ..	39,481
Canada	185,592	Sweden	35,358
Australia	182,258	Spain	(b) 35,000
U.S.S.R. (Russia) ..	(b) 105,000	Japan	29,068
Germany	(a)	Rhodesia	21,600
Peru	57,262	Bolivia	14,381
Italy	53,700		

(a) Not available.

(b) Estimated.

The production of Australia quoted above represents the metallic contents of zinc ores produced during 1947 and is equal to 9.9 per cent. of world output. The quantity of zinc metal extracted in Australia in that year was 69,421 tons.

4. **Prices and Employment.**—Information regarding prices of zinc and employment in zinc-mining will be found on page 857.

§ 7. Iron.

1. **General.**—Although iron ore is widely distributed throughout Australia, the only known ore bodies of large extent and high grade which are easy of access are those situated at Yampi Sound, Western Australia and at Iron Knob, South Australia. Estimates of the reserves at these centres place the quantities available at approximately 100 million tons and 150 million tons respectively. Bearing in mind the expansion of the iron industry in Australia, and the limitations of these reserves, the Commonwealth Government prohibited the export of iron ore from 1st July, 1938. A survey of the iron ore resources of Australia undertaken by the Commonwealth Geologist was completed at the end of 1940.

2. **Production.**—(i) *New South Wales.* The production in 1935 of pig-iron from ores mined in New South Wales amounted to 4,580 tons, valued at £18,320. No iron ores were produced from 1935 until 1941 when 202,180 tons of ore were mined. In 1942,

375,297 tons were mined but only 86,185 tons in 1945. Since that year there has been no iron-ore mined in this State for conversion into pig-iron. For many years the chief source of supply has been South Australia.

Small quantities of iron oxide produced in New South Wales are used by the various gas-works for purifying gas, and also in the manufacture of paper, and for pigments. These supplies are drawn chiefly from the deposits in the Port Macquarie Division. During 1947 the iron oxide raised amounted to 9,238 tons, valued at £7,633. Ironstone flux amounting to 2,432 tons, valued at £950 was raised in the Goulburn Division during 1933. This is the only production recorded since 1922.

(ii) *Queensland.* Extensive deposits of iron ore are known to exist in Queensland. Their location and size, however, in comparison with the more favourable deposits of South Australia, preclude their exploitation. In 1947, 1,342 tons of ore were obtained by the Queensland Cement & Lime Co. from their workings at Biggenden.

(iii) *South Australia.* The production from the deposits worked by the Broken Hill Pty. Co. Ltd., at Iron Knob and at Middlebank reached its maximum in 1939, when 2,571,759 tons of ore valued at £2,957,523 were raised. The production of 2,145,529 tons, valued at £2,467,396, for 1947, represents a decrease of 426,230 tons and £490,127 on the 1939 figures.

(iv) *Western Australia.* The development of the deposits at Yampi Sound was discontinued in 1938 as a result of the embargo on exports. However, in 1942, production of iron ore was reported for the first time since 1938; it amounted to 150 tons, valued at £225. Production in 1943 amounted to 84 tons valued at £128, but up to 1947 no further production had been recorded.

Australian Iron & Steel Co. Ltd., on behalf of Broken Hill Proprietary Co. Ltd. continued the development of the iron deposits on Cockatoo Island in Yampi Sound.

The production of pig-iron was commenced at Wundowie in Western Australia in January, 1948 under the direction of the State Department of Industrial Development. The ore used is obtained from the local deposits and converted to pig-iron by the use of charcoal burnt from timber obtained in the same locality. The production, which amounted to 771 tons for the six months ended June, 1948, is sufficient for local requirements and to provide a small quantity for export to the eastern States.

The production of pyrites from which sulphuric acid is obtained for the manufacture of superphosphate has shown a marked expansion in Western Australia. Since 1942, when production amounted to 368 tons, it has risen to 86,952 tons in 1947.

(v) *Tasmania.* There has been no production of ironstone in Tasmania since 1943 when 7 tons, valued at £14 were produced. The production of pyrites, which in 1947 amounted to 42,329 tons, valued at £59,260, is not included in the mineral returns, but is credited to the manufacturing industry, as it is a by-product from the flotation of copper ore at Mount Lyell. This product is exported to the mainland, where the sulphur contents have displaced imported sulphur in the manufacture of chemical fertilizers.

Reference to the iron ore deposits in the various States appears in preceding issues of the Official Year Book (*see* No. 22, pp. 777-9).

3. **Iron and Steel Bounties.**—During 1947-48 the bounties paid under the Bounties Acts on articles manufactured from locally produced materials were as follows:—Wire-netting, £321; traction engines, £19,978. Corresponding amounts paid during 1946-47 were £633 and £22,955 respectively.

4. **Production of Iron and Steel—Principal Countries.**—(i) *General.* Particulars of the production in the principal countries during the years 1938, 1946 and 1947 according to figures published by the Imperial Institute and the Statistical Office of the United Nations are shown in the next table.

PIG-IRON AND STEEL : PRODUCTION IN PRINCIPAL COUNTRIES.
(^{'000} Tons of 2,240 lb.)

Country.	Pig-iron and Ferro-alloys.			Steel Ingots and Castings.		
	1938.	1946.	1947.	1938.	1946.	1947.
United States America	19,161	41,531	53,676	28,350	59,467	75,798
Germany	17,760	(a)	(a)	22,268	(a)	(a)
U.S.S.R. (Russia) ..	14,756	11,200	12,800	17,500	14,200	15,500
United Kingdom ..	6,761	7,761	7,785	10,398	12,695	12,725
France	5,977	3,389	4,809	6,040	4,338	5,642
Belgium	2,388	2,127	2,776	2,243	2,260	2,851
Canada	761	1,385	1,892	1,155	2,078	2,630
Czechoslovakia ..	1,215	945	1,400	1,710	1,642	2,250
Luxemburg	1,526	1,343	1,789	1,514	1,274	1,686
Italy	914	201	378	2,271	1,135	1,677
Poland	948	714	853	1,527	1,200	1,554
Australia (b) ..	980	906	1,143	1,230	1,096	1,346
India	1,571	1,415	1,410	936	1,301	1,261
Sweden	701	708	713	957	1,184	1,172
Japan	2,535	208	361	6,367	556	926
Spain	433	500	510	567	623	589
Union of South Africa	290	551	632	341	499	588
Hungary	330	158	299	638	347	587
Brazil .. ..	..	365	473	..	337	382
Austria	542	57	274	663	184	351
Mexico	119	278	(a)	72	247	316
Total—All Countries	81,000	79,000	98,000	107,600	109,800	134,000

(a) Not available.

(b) Year ended 30th June.

The principal producers in Australia are the Broken Hill Pty. Co. Ltd. and the Australian Iron and Steel Ltd., the former situated at Newcastle and the latter at Port Kembla in New South Wales. In South Australia, the Broken Hill Pty. Co. Ltd. established a blast furnace at Whyalla which was blown in during May, 1941, and has since continued to operate except for the periods May, 1944 to April, 1946 and April, 1949 to September, 1949.

In Western Australia, the production of pig-iron, under the direction of the State Department of Industrial Development, commenced in January, 1948 and, as previously mentioned, the output for the six months ended June, 1948 amounted to 771 tons.

(ii) *Australia.* The production of steel and pig-iron in Australia, of which New South Wales is the main producing State, is shown in the following table for each of the years 1938–39 to 1947–48.

PIG-IRON AND STEEL : AUSTRALIAN PRODUCTION.
(Tons.)

Year ended 30th June—	Pig-iron. (a)	Steel Ingots.	Blooms and Billets.	Year ended 30th June—	Pig-iron. (a)	Steel Ingots.	Blooms and Billets.
1939 ..	1,104,605	1,169,989	1,120,142	1944 ..	1,305,357	1,527,564	1,393,919
1940 ..	1,212,006	1,292,115	1,266,156	1945 ..	1,117,709	1,356,913	1,236,528
1941 ..	1,475,707	1,056,742	1,631,679	1946 ..	906,283	1,061,918	1,036,501
1942 ..	1,557,641	1,699,793	1,609,447	1947 ..	1,143,132	1,312,439	1,255,703
1943 ..	1,399,306	1,632,825	1,583,417	1948 ..	1,235,574	1,343,153	1,221,538

(a) Includes pig-iron for castings.

§ 8. Other Metallic Minerals.

1. **Wolfram and Scheelite.**—Tungsten ores occur in several of the States, in the Northern Territory and on King Island in Bass Strait, the last-named being included with Tasmania. Production during 1938 and the five years 1943 to 1947 is shown in the following table :—

WOLFRAM AND SCHEELITE : PRODUCTION.

Particulars.		1938.	1943.	1944.	1945.	1946.	1947.
WOLFRAM.							
New South Wales	cwt.	1,877	840	605	620	240	460
	£	25,740	14,033	10,982	9,604	3,859	9,184
Victoria ..	cwt.	..	282	60	..	..	..
	£	..	5,041	1,005	..	..	..
Queensland ..	cwt.	3,015	3,027	3,931	2,599	1,295	1,261
	£	30,779	56,778	73,445	48,176	20,773	28,283
South Australia ..	cwt.	..	3	1	..	..	..
	£	..	10	10	..	..	..
Western Australia	cwt.	..	..	..	..	..	..
	£	..	80	..	..	..	..
Tasmania ..	cwt.	5,982	4,600	4,838	4,220	3,140	4,020
	£	63,348	82,965	86,740	69,896	44,553	82,928
Northern Territory	cwt.	8,694	3,769	1,841	2,540	1,455	2,020
	£	78,277	58,166	31,583	42,937	21,696	41,020
Total ..	cwt.	19,568	12,521	11,276	9,979	6,130	7,761
	£	198,144	217,073	203,774	170,613	90,881	161,415

SCHEELITE.

New South Wales	cwt.	184	460	360	340	440	300
	£	2,472	9,185	7,247	7,111	8,680	6,847
Queensland ..	cwt.	13	48	52	101	9	156
	£	93	889	988	2,018	98	3,166
Western Australia	cwt.	..	5	39	16	100	(a) 120
	£	..	2,664	21,420	8,946	1,552	(a) 3,840
Tasmania ..	cwt.	611	3,984	644	10,560	12,560	12,620
	£	6,193	68,908	10,848	158,093	165,264	240,006
Total ..	cwt.	808	4,497	1,095	11,017	13,109	13,196
	£	8,758	81,646	40,503	176,168	175,594	253,859

(a) Concentrates.

2. **Cadmium and Cobalt.**—Cadmium is extracted at Risdon in Tasmania as a by-product from ores mined at Broken Hill in New South Wales, and on the west coast of Tasmania.

Cobalt as an oxide is recovered from the treatment of silver, lead and zinc ores of Broken Hill and Tasmanian origin in the same way as is cadmium. The production of cobalt and cadmium is shown for the years 1938 and 1943 to 1947 in the following table :—

CADMIUM AND COBALT: PRODUCTION.

Year.	Cadmium.				Cobalt Oxide.			
	Extracted in Tasmania from Ores mined in—				Extracted in Tasmania from Ores mined in—			
	New South Wales.	Tasmania.	Total.		New South Wales.	Tasmania.	Total.	
	Cwt.	Cwt.	Cwt.	£	Cwt.	Cwt.	Cwt.	£
1938	2,943	980	3,923	79,406	377	12	389	8,084
1943	2,344	807	3,151	70,609	274	13	287	6,604
1944	4,206	794	5,000	112,046	258	8	266	6,092
1945	3,818	588	4,406	98,671	274	5	279	6,427
1946	3,737	675	4,412	98,823	305	4	309	7,106
1947	3,076	691	3,767	84,335	239	4	243	5,102

The figures shown above do not include the metallic contents of cadmium and cobalt contained in the ores and concentrates exported overseas.

3. **Platinum and Platinoid Metals.**—(i) *Platinum.* (a) *New South Wales.* The deposits worked in the State are situated in the Ffield division, near Parkes, and in the Ballina division. The production in 1945 from all divisions amounted to 2 oz. valued at £22. The total production recorded to the end of 1945 amounted to 20,555 oz., valued at £130,667. There has been no production in New South Wales since that year.

(b) *Victoria.* In Gippsland the metal has been found in association with copper and 127 oz. were produced in 1913, but there has been no production in recent years.

(c) *Queensland.* Platinum, associated with osmiridium, has been found in the beach sands between Southport and Currumbin, in creeks on the Russell gold-field near Innisfail, and in alluvial deposits on the Gympie gold-field, but no production has been recorded.

(ii) *Osmium, Iridium, etc.* (a) *New South Wales.* Small quantities of osmium, iridium and rhodium are found in various localities. Platinum, associated with iridium and osmium, has been found in the washings from the Aberfoil River about 15 miles from Oban, on the beach sands of the northern coast, in the gem sands at Bingara, Mudgee, Bathurst and other places. In some cases, as for example in the beach sands of Ballina, the osmiridium and other platinoid metals amount to as much as 40 per cent. of the platinum, or about 28 per cent. of the whole metallic content. There was no production of these metals during 1947.

(b) *Victoria.* In Victoria, iridosmine has been found near Foster, and at Waratah Range, South Gippsland.

(c) *Tasmania.* The yield of osmiridium was returned as 99 oz. in 1947, valued at £2,700, compared with the record production in 1925 of 3,365 oz., valued at £103,570. The decrease in later years was largely due to the decline in price from £31 per oz. in 1925 to £15 os. 4d. per oz. in 1938 (although the price rose to £24 19s. 1d. per oz. in 1940 and reached £27 5s. 5d. in 1947), but the depletion of the known alluvial deposits was also a factor.

4. **Other.**—Detailed information in regard to occurrence and production of other metallic minerals in each of the States appears in Official Year Book No. 22, pp. 780-3 and in preceding issues.

§ 9. Coal.

1. **Production in each State.**—An account of the discovery of coal in each State appears in preceding issues of the Official Year Book (*see* No. 3, pp. 515-6). The quantity and value of the production in each State and in Australia during 1915, 1925, 1935, 1938 and for each of the years 1944 to 1948 are shown in the following table:—

BLACK COAL : PRODUCTION.

Year.	N.S.W.	Victoria.(a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
QUANTITY (Tons).							
1915 ..	9,449,008	588,104	1,024,273	..	286,666	64,536	11,412,587
1925 ..	11,396,199	534,246	1,177,173	..	437,461	81,698	13,626,777
1935 ..	8,698,579	476,495	1,051,978	..	537,188	123,714	10,887,954
1938 ..	9,570,930	307,258	1,113,426	..	604,792	83,753	11,680,159
1944 ..	11,042,939	257,692	1,659,675	34,620	558,322	143,641	13,696,889
1945 ..	10,176,254	247,297	1,634,746	41,452	543,363	149,077	12,792,189
1946 ..	11,186,363	191,290	1,567,520	135,460	642,287	158,751	13,881,691
1947 ..	11,683,123	173,683	1,883,414	193,351	730,566	167,140	14,831,217
1948 ..	11,721,446	167,540	1,742,396	239,464	732,938	179,393	14,783,177

VALUE.(b) (£.)

1915 ..	3,424,630	274,770	409,342	..	137,859	30,418	4,277,019
1925 ..	9,302,515	596,117	1,037,956	..	363,203	70,424	11,370,215
1935 ..	4,887,341	282,253	843,034	..	318,013	86,204	6,416,845
1938 ..	5,652,964	188,101	958,884	..	375,083	61,991	7,237,023
1944 ..	9,761,304	407,793	1,785,621	12,117	583,076	122,673	12,672,584
1945 ..	9,451,930	494,690	1,759,311	14,508	572,896	125,719	12,419,054
1946 ..	10,534,914	392,812	1,692,272	47,411	730,104	137,736	13,535,249
1947 ..	12,101,178	299,784	2,237,738	67,777	840,249	154,725	15,701,451
1948 ..	14,938,182	347,687	2,347,065	119,732	880,236	177,652	18,810,554

(a) Excludes brown coal, shown in next table.

(b) At the pit's mouth.

The figures for Victoria already quoted exclude the quantities and values of brown coal which were as follows:—

BROWN COAL : PRODUCTION IN VICTORIA.

Year.	Quantity.	Value.(a)	Year.	Quantity.	Value.(a)
	Tons.	£		Tons.	£
1915 ..	2,864	573	1944 ..	5,016,437	566,444
1925 ..	876,468	166,404	1945 ..	5,445,108	641,069
1935 ..	2,221,515	317,144	1946 ..	5,707,039	706,504
1938 ..	3,675,450	351,721	1947 ..	6,140,140	937,429
			1948 ..	6,692,291	1,187,715

(a) Cost of production.

2. **Distribution and Production of Coal in each State.**—(i) *New South Wales.* The coal deposits of New South Wales are the most important and extensively worked in Australia. The principal fields are known as the Northern, Southern and Western, and are situated at Newcastle, Bulli and Lithgow respectively.

The coal from the various districts differs considerably in quality—that from the Northern district being especially suitable for gas-making, household purposes and steam, while the product of the Southern and Western districts is essentially a steaming coal. The Greta coal seams in the Northern division are being worked extensively between West Maitland and Cessnock, and this stretch of country, covering a distance of 15 miles, is the most important coal-mining district in Australia.

The following table shows the yields in each of the three districts during the five years 1944 to 1948 compared with 1938. Separate details are given respecting coal won underground and from open cuts—

COAL : PRODUCTION IN DISTRICTS OF NEW SOUTH WALES.

District.	1938.	1944.	1945.	1946.	1947.	1948.(b)
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Northern—Underground ..	6,294,213	7,324,270	6,440,531	7,176,652	7,325,874	7,146,500
Open Cut ..	..	11,176	33,739	513,449	553,597	635,100
Southern—Underground ..	1,831,408	2,005,642	1,775,165	1,738,058	1,915,899	1,922,400
Open Cut ..	..	..	..	..	..	..
Western—Underground ..	1,445,309	1,533,366	1,437,486	1,515,297	1,482,696	1,397,800
Open Cut ..	..	168,485	188,833	242,927	405,057	619,500
Total—Underground ..	9,570,930	10,863,278	9,653,182	10,430,007	10,724,469	10,466,700
Open Cut ..	..	179,661	523,072	756,376	958,654	1,254,600
Grand Total ..	9,570,930	11,042,939	10,176,254	11,186,383	11,683,123	11,721,300
Total Value (a) ..	£ 5,652,964	9,761,304	9,451,930	10,534,914	12,101,178	14,938,182
Average value per ton(a) ..	11s. 10d.	17s. 8d.	18s. 7d.	18s. 9d.	20s. 8½d.	25s. 6d.

(a) At the pit's mouth.

(b) Subject to revision.

The production of coal in New South Wales exceeded 10 million tons in each year from 1920 to 1927, the maximum annual production in this period being in 1924, when 11,618,000 tons were produced. Consequent upon the economic depression, production fell to 6,400,000 tons in 1931, but steadily increased each year to 10,051,519 tons in 1937. Production declined by 480,000 tons in 1938 but rose to 11,195,832 tons in 1939. A decrease of 1,646,000 tons in 1940 was followed in the next two years by increased production, the highest output yet recorded, namely, 12,205,035 tons, being registered in 1942. Production decreased during the next three years by 732,436, 430,560 and 866,685 tons respectively and stood at 10,176,254 tons in 1945. Since that year there has been an annual increase in production, the increases in 1946, 1947 and 1948 being 1,010,129, 496,740 and 38,000 tons respectively. Production of coal from open cuts, by which coal is won after the overburden has been removed, has expanded rapidly in recent years and in 1948 represented 10.7 per cent. of the total coal won. Of the total quantity of coal won in New South Wales since the commencement of operations to the end of 1948, namely, 535 million tons, about 363 million tons or 68 per cent. was obtained in the Northern District, 107 million tons or 20 per cent. in the Southern District, and 65 million tons or 12 per cent. in the Western District.

(ii) *Victoria.* (a) *Black Coal.* The deposits of black coal in Victoria occur in three main areas in the southern portion of the State, namely, the Wannon, the Otway and South Gippsland, which total approximately 3,500 square miles. The workable seams are restricted to the South Gippsland area, where the thickness ranges from 2 feet 3 inches to 6 feet. The total quantity of black coal mined in Victoria to the end of

1948 amounted to 20,548,741 tons, valued at £17,396,765. The record output, namely 703,828 tons, occurred in 1929 but production since that year has dropped considerably and in 1948 was only 167,540 tons.

The output of black coal in Victoria during each of the five years ended 1948 compared with 1938 was as follows :—

BLACK COAL : PRODUCTION IN VICTORIA.

Year.				State Coal- mine.	Other Coal- mines.	Total Production.	Total Value. (a)
				Tons.	Tons.	Tons.	£
1938	..	..	..	253,065	54,193	307,258	188,101
1944	..	..	..	224,313	33,379	257,692	407,793
1945	..	..	..	213,710	33,587	247,297	494,690
1946	..	..	..	169,650	21,640	191,290	392,812
1947	..	..	..	153,236	20,447	173,683	299,784
1948	..	..	..	145,880	21,660	167,540	347,687

(a) At the pit's mouth.

(b) *Brown Coal. General.* Victoria is richly endowed, both in quantity and quality, with brown coal deposits. Some account of these deposits and of the operations of the State Electricity Commission in connexion therewith will be found in preceding Official Year Books (see No. 22, p. 785). The brown coal produced in Victoria in 1947 amounted to 6,140,140 tons, all but 196,047 tons being procured at the State open cut at Yallourn. During 1947-48 6,192,336 tons of brown coal were produced by the State Electricity Commission, of which 3,763,828 tons went to the power station, 2,230,879 tons to the briquette factory and 197,629 tons to other factories for use as fuel.

Production of Briquettes. The briquetting plant of the State Electricity Commission started operations in November, 1924, and the output, which in 1926 was 95,477 tons, had increased to 180,905 tons in 1930 and to 545,236 in 1947-48. Two and a half tons of brown coal are required to make one ton of briquettes.

The table following shows the production and distribution of brown coal, and the production of briquettes in Victoria for the years 1943-44 to 1947-48, compared with 1938-39.

BROWN COAL : PRODUCTION AND UTILIZATION, VICTORIA.

('000 Tons.)

Year.		State Electricity Commission.					Brown Coal for other Industries.
		Total Production.	Brown Coal used as Fuel.		Brown Coal used as Material in Production of Briquettes.	Production of Briquettes.	
			Generating Station.	Briquette Works.			
1938-39	..	3,643	2,096	516	1,031	400	..
1943-44	..	4,829	3,215	538	1,076	417	..
1944-45	..	5,249	3,527	574	1,148	431	..
1945-46	..	5,534	3,525	641	1,282	493	86
1946-47	..	5,882	3,667	651	1,303	490	261
1947-48	..	6,415	3,767	743	1,487	545	418

(iii) *Queensland.* The distribution of production during the years 1938 and 1944 to 1948 was as follows:—

COAL : PRODUCTION IN QUEENSLAND.

(Tons.)

District.	1938.	1944.	1945.	1946.	1947.	1948.
Ipswich	547,901	802,269	812,641	823,737	967,007	902,411
Bowen	224,778	316,016	292,043	234,512	267,417	238,487
Clermont	88,407	145,237	177,331	161,777	240,564	216,610
Maryborough ..	77,162	128,606	113,578	103,929	139,635	132,085
Darling Downs ..	76,571	126,950	112,666	107,555	123,758	117,277
Rockhampton ..	64,174	108,043	95,799	82,699	85,540	73,611
Chillagoe (Mount Mulligan) ..	19,192	18,961	19,960	22,193	23,907	18,670
Mount Morgan ..	13,698	13,593	10,728	31,118	35,586	43,245
Mackay	1,543	..	..	..	..	..
Total	1,113,426	1,659,675	1,634,746	1,567,520	1,883,414	1,742,396

The production of 1,883,414 tons in 1947 represents the highest annual production to date.

(iv) *South Australia.* The increasing demand for coal to meet the industrial expansion of South Australia has caused intensified efforts to develop the coal resources of the State so as to reduce, as far as possible, its dependence upon supplies from New South Wales. A new field of sub-bituminous coal was opened up at Leigh Creek, South Australia, in 1942 when 1,650 tons were produced. There was no production in 1943, but in 1944, 34,620 tons, valued at £12,117, were produced. Production has increased rapidly since that year and stood at 239,464 tons, valued at £119,732, in 1948.

Statistics published by the Department of Mines show that the quantities of Leigh Creek coal consumed in South Australia rose from 18,820 tons in 1944 to 34,208 tons in 1945, 68,925 tons in 1946, 128,963 tons in 1946-47 and 177,135 tons in 1947-48.

Details of production (which is by open-cut methods) and employment are given in the following table for the years 1944 to 1948.

COAL : PRODUCTION AND EMPLOYMENT IN SOUTH AUSTRALIA.

Year.				Production.	Value.	Numbers Employed.
				Tons.	£	
1944	..	..	..	34,620	12,117	91
1945	..	..	..	41,452	14,508	100
1946	..	..	..	135,400	47,411	121
1947	..	..	..	193,351	67,777	124
1948	..	..	..	239,464	119,732	237
Total to 1948				645,997	263,195	..

(v) *Western Australia.* Details of the quantity of coal raised on the Collie coal-fields in Western Australia and the men employed are given in the table below for the years 1944 to 1948 compared with 1938. Production at 732,938 tons in 1948 exceeded the previous record of 730,506 tons in 1947.

COAL : PRODUCTION AND EMPLOYMENT IN WESTERN AUSTRALIA.

Year.	Production.	Value.	Men employed.		
			Above ground.	Below ground.	Total.
	Tons.	£			
1938	604,792	375,083	158	607	765
1944	558,323	583,076	207	673	880
1945	543,303	572,896	224	636	860
1946	642,287	730,104	262	693	955
1947	730,506	840,249	287	745	1,032
1948	732,938	880,236	296	768	1,064

(vi) *Tasmania.* Details of the production of coal in Tasmania and the numbers employed are given in the following table for the years 1944 to 1948 compared with 1938. The chief source of coal supplies in this State is the Cornwall Coal Mine, situated on the east coast, which produced 94,219 tons in 1948 or 53 per cent. of the State's output.

Production in 1948, at 179,393 tons, exceeded the previous record of 167,140 tons in 1947.

COAL : PRODUCTION AND EMPLOYMENT IN TASMANIA.

Year.			Production.	Value.	Men employed.
			Tons.	£	
1938 .. ..	..	..	83,753	61,991	269
1944 .. ..	..	..	143,641	122,673	277
1945 .. ..	..	..	149,077	125,719	279
1946 .. ..	..	..	158,751	137,736	276
1947 .. ..	..	..	167,140	154,725	288
1948 .. ..	..	..	179,393	177,652	274

(vii) *Australia's Coal Reserves.* The latest available estimate of the actual and probable coal reserves of Australia is that prepared by the Coal and Lignites Panel of the Power Survey Sectional Committee of the Standards Association of Australia in May, 1950. The following table shows the actual and probable coal reserves as determined by that Committee :—

ACTUAL AND PROBABLE COAL RESERVES OF AUSTRALIA. ('000,000 Tons.)

State.					Anthracitic and Bituminous Coals.	Sub-bituminous and Lignite Coals.
New South Wales	..	..	..	..	11,770	100
Victoria	..	..	..	..	33	37,000
Queensland	..	..	..	..	2,000	67
South Australia	..	..	..	..	..	650
Western Australia	..	..	..	..	..	1,000
Tasmania	..	..	..	..	244	..
Total	..	..	..	..	(a) 14,000	(a) 39,000

(a) Rounded to nearest '000,000,000 tons.

3. **Production in Various Countries.**—The total known coal production of the world in 1947 amounted to about 1,628 million tons, towards which Australia contributed about 21 million tons, or about 1.3 per cent. The following tables show the production of the chief British and foreign countries during each of the three years 1945 to 1947 compared with 1938 :—

COAL : PRODUCTION IN BRITISH COUNTRIES.

('000 Tons of 2,240 lb.)

Country.	Black Coal.				Brown Coal, Lignite.			
	1938.	1945.	1946.	1947.	1938.	1945.	1946.	1947.
United Kingdom ..	227,015	182,255	190,277	197,813	..	..	..	..
India ..	29,052	29,107	29,709	26,918	..	..	..	..
Union of South Africa ..	16,027	23,182	23,229	23,442	..	..	..	..
Australia ..	11,680	12,792	13,882	14,831	3,675	5,445	5,707	6,140
Canada ..	9,223	13,318	14,542	12,770	3,540	1,370	1,360	1,402
New Zealand ..	2,090	1,063	2,527	2,441	132	246	267	311
Southern Rhodesia ..	1,027	1,641	1,587	1,484	..	..	..	..

COAL : PRODUCTION IN FOREIGN COUNTRIES.

('000 Tons of 2,240 lb.)

Country.	Black Coal.				Brown Coal, Lignite.			
	1938.	1945.	1946.	1947.	1938.	1945.	1946.	1947.
United States of America	349,684	562,395	528,358	611,554	2,677	2,382	2,382	2,566
Germany ..	183,238	40,557	64,651	84,334	191,899	106,040	157,351	158,060
Poland ..	37,502	24,795	46,541	58,196	9	..	1,432	4,691
France ..	45,770	32,787	46,462	44,513	1,041	1,665	2,055	2,067
Czechoslovakia ..	15,900	11,240	13,913	16,047	15,779	15,172	19,204	22,031
Japan ..	47,915	22,009	20,054	26,805	..	..	2,315	2,776
Belgium ..	29,118	15,467	22,419	24,005	..	..	..	..
Spain ..	5,559	10,461	10,589	10,394	163	1,329	1,315	1,251
Netherlands ..	13,275	5,006	8,183	9,041	168	130	493	466
Hungary ..	1,026	685	709	1,043	8,186	4,050	5,539	7,627
Bulgaria ..	140	(b) 227	(b) 227	(b) 227	1,826	3,377	3,466	3,979
Turkey ..	2,548	3,660	3,770	3,883	143	504	594	810
Austria ..	222	70	103	175	3,477	2,033	2,364	2,791
Chile ..	2,011	2,019	1,923	2,046	..	..	..	..
Brazil ..	871	2,043	1,867	1,957	..	..	..	..
Mexico ..	879	900	967	1,023	..	..	..	..
Portugal ..	303	425	374	364	18	161	139	106
China ..	4,600	614	(a)	(a)	..	..	..	..
Greece ..	..	..	..	..	106	70	(a)	(a)

(a) Not available.

(b) Estimated.

World production of coal amounted to 1,440 million tons in 1938 ; it rose to 1,770 million tons in 1943 but declined to 1,628 million tons in 1947. Of these quantities those produced in the British Commonwealth totalled 304 million or 21 per cent. in 1938, 286 million or 16 per cent. in 1943 and 288 million tons or 17.7 per cent. in 1947.

4. **Exports.**—(i) *General.* The quantity of coal of Australian production exported to other countries in 1947-48 was 67,228 tons, valued at £108,733, shipped mainly from New South Wales. These figures of overseas exports exclude bunker coal supplied to overseas vessels, which in 1947-48 amounted to 283,354 tons, valued at £597,559. The quantities and values of the overseas exports of Australian coal for the years specified are shown in the following table. Similar details for the coal taken for bunker purposes on overseas vessels are shown below in a separate table.

COAL : OVERSEA EXPORTS, AUSTRALIA.

(EXCLUDING BUNKER COAL).

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Tons.	£		Tons.	£
1913 ..	2,098,505	1,121,505	1944-45 ..	189,198	223,677
1921-22 ..	1,028,767	1,099,809	1945-46 ..	75,883	92,764
1931-32 ..	344,015	341,800	1946-47 ..	44,375	54,754
1938-39 ..	382,085	347,054	1947-48 ..	67,228	108,733
1943-44 ..	157,741	182,354			

Australian coal taken for bunker purposes on oversea vessels during the same years was as follows:—

BUNKER COAL SUPPLIED TO OVERSEA VESSELS, AUSTRALIA.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Tons.	£		Tons.	£
1913 ..	1,647,870	1,018,375	1944-45 ..	207,462	382,505
1921-22 ..	1,498,035	2,178,101	1945-46 ..	228,977	415,167
1931-32 ..	506,140	534,897	1946-47 ..	355,428	655,207
1938-39 ..	549,453	561,063	1947-48 ..	283,354	597,559
1943-44 ..	211,188	371,584			

(ii) *New South Wales.* The distribution of the total output from New South Wales collieries during the years 1943-44 to 1947-48 compared with 1938-39, according to data compiled by the Government Statistician for that State, was as follows.

COAL : DISTRIBUTION OF OUTPUT, NEW SOUTH WALES.

('000 Tons.)

Year.	Exports.				Local Consumption.	Total.
	Interstate as—		Overseas as—			
	Cargo.	Bunker.	Cargo.	Bunker.		
1938-39 ..	1,860	411	382	517	5,744	8,914
1943-44 ..	2,722*	378	158	162	8,139	11,559
1944-45 ..	2,866	340	189	159	7,601	11,155
1945-46 ..	2,499	287	75	173	6,997	10,031
1946-47 ..	2,378	290	44	289	8,211	11,212
1947-48 ..	2,537	307	59	234	8,643	11,780

5. *Consumption in Australia.*—Details of the average annual production of coal and its distribution in Australia are given in the following table for the five years ended 1938-39 and 1946-47, together with similar details of production and distribution for the year 1947-48.

Under normal circumstances the production and consumption of coal move in the same direction, but in times of short supplies or abnormal consumption consumers may be compelled to rely upon accumulated stocks, and, consequently annual figures may move out of alignment. For this reason the following table has been prepared on a five-yearly basis in order to smooth out any variations from the normal.

COAL : PRODUCTION AND UTILIZATION IN AUSTRALIA.

Particulars.		Average for Five Years Ended—				Total for Year. 1947-48.	
		1938-39.		1946-47.			
BLACK COAL.							
Source—		'000 Tons.	%	'000 Tons.	%	'000 Tons.	%
Production of Saleable Coal <i>a</i>		11,169	99.72	13,762	99.98	14,734	99.97
Imports		31	0.28	3	0.02	4	0.03
Total Supplies ..		11,200	100.00	13,765	100.00	14,738	100.00
Disposal—							
Exported overseas—							
Bunker		592	5.29	259	1.86	283	1.92
Other		346	3.09	144	1.06	67	0.45
Total		938	8.38	403	2.92	350	2.37
Consumed as fuel in—							
Electric Light and Power Works		1,796	16.03	2,732	19.86	3,441	23.34
Factories (<i>b</i>)		2,067	18.46	2,428	17.64	2,517	17.08
Railway Locomotives (<i>c</i>)		2,328	20.78	3,209	23.34	3,043	20.65
Total		6,191	55.27	8,369	60.84	9,001	61.07
Consumed as raw material in—							
Gas works		1,111	9.92	1,717	12.52	1,982	13.45
Coke Works		1,467	13.10	1,916	13.86	2,103	14.27
Total		2,578	23.02	3,633	26.38	4,085	27.72
Balance available for other consumption and accumulation of stocks (<i>d</i>) ..		1,493	13.33	1,360	9.86	1,302	8.84
Grand Total ..		11,200	100.00	13,765	100.00	14,738	100.00
BROWN COAL.							
Production of Brown Coal ..		'000 Tons. 3,064		'000 Tons. 5,294		'000 Tons. 6,415	
Utilization—							
As fuel in Electric Light and Power Works ..		1,673	% 54.60	3,456	% 65.40	3,767	% 58.72
As fuel and as a raw material by Briquette Works ..		1,391	45.40	1,769	33.42	2,230	34.76
Recorded consumption as fuel in factories ..		(<i>e</i>)	(<i>e</i>)	62	1.08	384	5.99
Balance—Unrecorded consumption other purposes		(<i>e</i>)	(<i>e</i>)	7	0.10	34	0.53
Total		3,064	100.00	5,294	100.00	6,415	100.00

(a) Estimated only.

(b) Estimated where details were not available.

(d) Includes bunker coal for interstate and intrastate shipping.

(c) Government Railways

(e) Not available.

The production of coal is ascertained only in calendar years and to relate it to the other data in the table above it has been necessary to estimate the output of black coal in annual periods ended June. Checks applied from other official sources confirm the reliability of these estimates.

6. **Coal Value at Pit's Mouth.**—(i) *New South Wales.* Particulars of the average value at the pit's mouth of the saleable output of coal for each district and for New South Wales as a whole are shown in the following table for the years 1938 and 1943 to 1947, according to figures compiled by the State Statistician. The figures relate to the pit head value (including subsidy).

**AVERAGE VALUE^(a) AT THE PIT'S MOUTH PER TON OF SALEABLE COAL^(b) :
NEW SOUTH WALES.**

(s. d.)

Year.	Northern District.	Southern District.	Western District.	Average for State.
1938	12 0	14 0	9 6	12 0
1943	16 10	20 1	14 9	17 2
1944	17 7	21 2	15 0	17 10
1945	18 7	21 11	15 4	18 7
1946	18 8	23 1	15 7	18 10
1947	20 11	23 11	16 10	20 9

(a) Including subsidy from 1943. (b) "Saleable" output represents "gross" output less coal used in operating the mines and miner's coal.

(ii) *Victoria.* The average value per ton at the pit's mouth of black coal produced in Victoria was as follows :—1938, 12s. 3d.; 1943, 27s. 5d.; 1944, 29s. 3d.; 1945, 37s. 11d.; 1946, 40s. 5d.; and 1947, 33s. 2d.

The figures shown above exclude Victorian brown coal which in 1947 cost 3s. 1d. per ton to produce.

(iii) *Queensland.* Average values in the principal coal-producing districts during the years 1938 and 1943 to 1947 were as follows :—

AVERAGE VALUE PER TON OF COAL AT PIT'S MOUTH : QUEENSLAND.

(s. d.)

District.	1938.	1943.	1944.	1945.	1946.	1947.
Ipswich	17 0	21 0	21 2	21 3	21 3	23 4
Darling Downs	19 11	24 7	24 6	24 9	24 6	26 5
Wide Bay and Maryborough	24 0	28 8	28 9	28 8	29 0	33 0
Rockhampton	17 0	20 2	19 9	21 8	19 11	21 10
Clermont	13 8	16 8	16 6	16 5	16 4	17 4
Bowen	14 10	20 7	20 5	20 5	21 2	24 6
Chillagoe (Mount Mulligan) ..	31 6	34 1	34 1	34 8	35 2	38 2
Average for State ..	17 2	21 6	21 6	21 6	21 7	23 10

(iv) *South Australia.* The cost of production of black coal (sub-bituminous) was 7s. per ton in 1947.

(v) *Western Australia.* The average value per ton of Collie coal at pit's mouth was as follows :—1938, 12s. 5d.; 1943, 18s. 5d.; 1944, 20s. 6d.; 1945, 21s. 1d.; 1946, 22s. 9d.; and 1947, 25d. 10d.

(vi) *Tasmania.* The average value per ton of coal at the pit's mouth in Tasmania for the five years ended 1947 was :—1943, 16s. 1d.; 1944, 17s. 0d.; 1945, 16s. 10d.; 1946, 17s. 5d.; and 1947, 18s. 6d.; compared with 14s. 10d. in 1938.

7. Prices in New South Wales, Great Britain, Canada and the United States of America.—In the following table the prices of coal in Canada and the United States of are compared with the average value per ton of coal in New South Wales and Great Britain.

AVERAGE PRICES OF COAL PER TON: NEW SOUTH WALES, GREAT BRITAIN, CANADA AND UNITED STATES OF AMERICA.

Country.	1938.	1942.	1943.	1944.	1945.	1946.	1947.	1948.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
New South Wales (a) ..	12 0	16 1	17 2	17 10	18 7	18 10	20 9	25 8
Great Britain (b) ..	16 8	24 1	27 3	31 3	35 0	36 10	40 3	47 2½
Canada—Bituminous (c) ..	5.417	5.700	5.700	6.650	6.788	6.980	6.980	6.980
United States of America— Bituminous (d) ..	4.327	4.782	5.045	5.239	6.356	5.776	6.873	(e) 8,118

(a) Average pit head value per ton of 2,240 lb.; the figures relate to saleable coal and include subsidy from 1943. (b) Average value at the mine per ton of 2,240 lb., in sterling. (c) Wholesale price in Canadian currency per ton of 2,000 lb. (d) Wholesale price in United States of America currency per ton of 2,000 lb. (e) Average for nine months, March to November.

8. Employment in Coal-mines.—The number of persons employed, both above and below ground, in coal-mines in each of the producing States is given for selected years from 1915 and for each of the five years ended 1947:—

COAL-MINES: PERSONS EMPLOYED.

Year.	New South Wales.	Victoria.		Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
		Black.	Brown.					
1915	17,959	1,312	(a)	2,518	..	498	161	22,448
1925	24,049	1,947	646	2,826	..	677	312	30,457
1935	13,337	1,397	615	2,455	..	689	340	18,833
1938	15,815	1,322	444	2,495	..	705	269	21,110
1943	17,497	1,203	630	2,808	..	838	278	23,344
1944	17,468	1,196	613	2,978	91	880	277	23,503
1945	17,427	1,016	584	2,966	100	860	270	23,232
1946	17,448	924	655	2,641	121	955	276	23,020
1947	17,614	860	594	3,337	124	1,032	288	23,849

(a) Included with black coal: production prior to 1925 was of little significance.

The year of maximum employment was 1926 when 31,774 persons were engaged in the coal-mines of Australia. Shortly after that year the industrial depression and a prolonged stoppage of work on one of the principal fields of New South Wales during 1929 and 1930 seriously affected the figures of employment. Since 1933 there has been a gradual increase, but the numbers employed in 1947 were only about three-quarters of the maximum figure already quoted. In New South Wales in 1939, 3,594,000 tons of coal, or 32.1 per cent. of the total output of underground coal, was cut by machinery, compared with 4,418,000 tons or 38.7 per cent. in 1943, 4,099,000 tons or 37.7 per cent. in 1944, 3,561,000 tons or 36.9 per cent. in 1945, 3,819,000 tons or 36.6 per cent. in 1946 and 4,150,000 tons or 38.7 per cent. in 1947. Similar details for other States are not available.

9. Accidents in Coal-mining.—The following table gives the number of persons killed or injured in the coal-mining industry in Australia during 1947, with the proportion per 1,000 employed, and in relation to the quantity of coal raised, a factor which must be reckoned with in any consideration of the degree of risk attending mining operations. Although no precise definition of an accident is available, any disablement from misadventure which rendered the injured unfit for work for fourteen days or more appears to have been uniformly adopted by the State Departments of Mines.

COAL-MINING : EMPLOYMENT AND ACCIDENTS, 1947.

State.	Persons Employed in Coal-mining.	No. of Persons.		Proportion per 1,000 Employed.		Tons of Coal raised for each Person—	
		Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales ..	17,614	(a) 16	(a) 82	0.91	4.66	730,195	142,477
Victoria (b) ..	1,454	1	13	0.69	8.94	6,313,823	485,679
Queensland ..	3,337	3	197	0.90	59.04	627,805	9,560
South Australia ..	124	..	7	..	56.45	..	27,622
Western Australia ..	1,032	..	281	..	272.29	..	2,600
Tasmania ..	288	..	4	..	13.89	..	41,785
Total ..	23,849	20	584	0.86	20.29	1,048,570	35,910

(a) Includes shale.

(b) Includes brown coal.

The next table shows for the five-yearly period 1943 to 1947 annual averages respecting the number employed in mining and the number of fatalities, and the rate of fatalities per 1,000 employed.

COAL-MINING : AVERAGE ANNUAL FATALITIES, 1943 TO 1947.

State.	Average No. of Coal-miners Employed.		Average Annual No. of Fatal Accidents.	Rate per 1,000 Employed.
New South Wales	17,491	18	1.03
Victoria	1,655	2	1.21
Queensland	2,964	4	1.35
South Australia	87	..	..
Western Australia	913	1	1.10
Tasmania	280	..	..
Total	23,390	25	1.07

10. Commonwealth Board of Inquiry into the Coal-mining Industry.—Reference to the appointment in 1945 of the Commonwealth Board of Inquiry, its terms of reference and the report issued in 1946 is given in Official Year Book No. 37, page 842.

11. Joint Coal Board.—(i) *General*. Under war-time emergency legislation, the Commonwealth had wide powers to control the production, distribution and price of coal in Australia. Under peace-time conditions, however, the constitutional powers of the Commonwealth were less effective and in order to ensure the maintenance of supplies of coal to meet the peace-time needs of industry it was necessary to seek wider powers.

With this objective in view, the Governments of the Commonwealth and New South Wales, the chief coal-producing State, mutually agreed to create jointly an authority with powers similar to and in some respects wider than those possessed under Commonwealth war-time legislation. Following this agreement, the Joint Coal Board was created and has functioned as from 1st March, 1947.

(ii) *Constitution*. The legislative authority of the Joint Coal Board is contained in the Coal Industry Act No. 40 of 1946 passed by the Commonwealth Parliament and in the Coal Industry Act No. 44 of 1946 passed by the Parliament of New South Wales. Both Acts are identical for all practical purposes except that the New South Wales Act granted to the Board powers to control collieries and compulsorily to requisition and resume land, buildings, plant, machinery and equipment.

(iii) *Powers.* Under Section 14 of the Commonwealth Act and Section 11 of the New South Wales Act, the powers and functions of the Board are stated to include the taking of such action as is necessary or desirable—(a) to ensure that coal is produced in the State in such quantities and with such regularity as will meet requirements throughout Australia and in trade with other countries; (b) to ensure that the coal resources of the State are conserved, developed, worked and used to the best advantage in the public interest; (c) to ensure that coal produced in the State is distributed and used in such manner, quantities, classes and grades and at such prices as are calculated best to serve the public interest and secure the economical use of coal and the maintenance of essential services and industrial activities; and (d) to promote the welfare of workers engaged in the coal industry in the State. In addition the Board has full power with regard to health matters but does not exercise any basic responsibilities as regards safety measures or inspection of mines; these duties remain the responsibility of the New South Wales Department of Mines.

§ 10. Coke.

1. *General.*—The production of coke in Australia was limited to about 250,000 tons per annum prior to the 1914-18 War. This was below local requirements and necessitated an annual import of about 27,000 tons from abroad. By 1920, production had risen to more than 500,000 tons and by 1938-39 it exceeded 1,000,000 tons. This increased production permitted an export of 30,000 tons in 1938-39. Imports in the same year were 9,700 tons. In 1947-48 the quantity exported was 9,434 tons, valued at £39,041, of which 5,394 tons, valued at £16,847, went to New Caledonia and 3,269 tons, valued at £17,118, to New Zealand. In 1947-48, South Australia imported 862 tons of coke valued at £6,414 from the Union of South Africa.

2. *Production at Coke Works.*—(i) *New South Wales.* The following table shows the production in New South Wales during 1938 and each of the five years 1943 to 1947, as recorded by the Department of Mines:—

COKE : PRODUCTION IN COKE WORKS, NEW SOUTH WALES.

Items.	1938.	1943.	1944.	1945.	1946.	1947.
Quantity tons	1,135,446	1,567,172	1,380,158	1,045,049	1,052,303	1,302,145
Value, total £	1,100,266	2,400,993	2,235,700	1,950,032	1,898,094	2,675,423
Value, per ton ..	19s. 5d.	£1 10s. 8d.	£1 12s. 5d.	£1 17s. 4d.	£1 16s. 1d.	£2 1s. 1d.

(ii) *Queensland* A small quantity of coke is made in Queensland, the quantity returned in 1938 being 30,984 tons, of which 27,328 tons were produced at the Bowen State Coke Works. The greater proportion of the output of these works was consigned to the Mount Isa Mines Ltd. and to the Chillagoe State smelters. Hitherto the coke used at these ore-treatment works was imported from New South Wales, but now the local output is sufficient to meet the requirements of the State and leave a small surplus available for export. The following table shows the amount manufactured at the State Coke Works during the five years ended 1947-48, compared with 1938-39.

COKE : PRODUCTION IN STATE COKE WORKS, QUEENSLAND.

Year.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Quantity tons	26,032	9,347	13,181	11,591	12,574	14,880

In order to avoid duplication with coal values, the returns for coke have not been included in the general tables of mineral production in the early part of this chapter.

3. **Total Production, Australia.**—The production of coke in New South Wales and Queensland referred to above relates to the product of coke ovens only and excludes coke produced at gas works. In the following table, however, particulars of the total production of coke in Australia are shown together with the quantities produced at coke works and gas works respectively.

TOTAL COKE PRODUCTION : AUSTRALIA.

(Tons.)

Industry.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
COKE.						
Coke Works ..	1,104,873	1,485,342	1,223,892	980,095	1,197,630	1,384,238
Gas Works ..	757,046	992,898	1,032,950	1,027,157	1,072,906	1,170,545
Total ..	1,921,919	2,478,240	2,256,842	2,013,162	2,270,542	2,554,783

COKE BREEZE.

Coke Works ..	78,584	126,221	102,402	(a) 80,466	93,403	(a) 111,062
Gas Works ..	35,996	48,873	50,480	51,845	55,546	60,556
Total ..	114,580	175,094	152,882	132,311	148,949	171,618

(a) Includes a small quantity produced in other works.

§ 11. Other By-Products from Coal.

In addition to coke, other products are obtained from the treatment of coal by coke and gas works. Details of some of these are given in the following table.

OTHER BY-PRODUCTS FROM COAL : AUSTRALIA.

Commodity.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
	Gals.	Gals.	Gals.	Gals.	Gals.	Gals.
Tar—Crude ..	34,614,313	39,618,296	36,001,178	34,754,021	39,143,025	41,166,231
Refined ..	3,752,201	10,332,404	11,913,537	13,185,119	14,631,470	14,996,193
Tar Oils (crude) ..	1,254,396	2,962,100	2,982,844	3,176,381	3,868,652	4,021,552
Ammoniacal Liquor ..	5,387,638	36,894,460	20,908,430	17,153,833	16,336,785	18,102,385
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Ammonium Sulphate	24,251	24,147	22,095	21,823	29,266	39,489

§ 12. Shale-oil and Mineral Oil.

1. **Shale-oil.**—(i) *General.* Reference to the deposits of shale and the search for mineral oil in Australia will be found in Official Year Book No. 22, pp. 791-3.

(ii) *New South Wales.* Reference to the establishment of the shale-oil industry in Australia will be found in previous issues of the Official Year Book. In 1937 negotiations were completed between the Commonwealth and New South Wales Governments and the National Oil Proprietary Ltd., by which the latter company undertook to develop the shale-oil industry in the Newnes-Capertee district. The Commonwealth Government agreed to protect the industry by exempting from excise, up to 10 million gallons annually, the Company's output of petrol for a period of 25 years. The successful

establishment of this plant would lead to an expansion of the industry in Australia and should provide a valuable training ground for technicians. Production of crude oil commenced at Glen Davis near Newnes in 1940 and the installation of a new processing plant enabled 3,696,981 gallons of petrol to be produced in 1946 and 4,063,628 gallons in 1947 compared with 1,043,821 gallons in 1944 and 1,979,511 gallons in 1945. In 1947 the yield of crude oil per ton of shale processed was 51 gallons. The following table shows the production of oil shale during the years 1943 to 1947 compared with 1940 :—

OIL SHALE : PRODUCTION IN NEW SOUTH WALES.

Year.	Northern District.		Southern District.		Western District.		Total	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£	Tons.	£
1940 ..	..	..	..	..	43,805	43,805	43,805	43,805
1943 ..	4,033	6,377	..	..	112,842	153,838	116,875	160,215
1944 ..	3,047	8,827	..	..	134,411	156,458	137,458	165,285
1945 ..	..	..	..	..	123,170	164,648	123,170	164,648
1946 ..	..	..	..	..	121,654	139,902	121,654	139,902
1947 ..	..	..	..	..	138,427	193,798	138,427	193,798

(iii) *Tasmania*. About 38,000 gallons of crude oil were produced in 1934 from shale treated in Tasmania, while the total quantity of oil distilled from shale up to the end of 1934 was set down at 357,000 gallons. The plant owned by the Tasmanite Shale Oil Company has not operated since the end of January, 1935.

Interest in the commercial utilization of oil shales of the Mersey Valley for the extraction of fuel oils has been retarded due to structural and physical conditions for underground mining and the low-grade nature of the shale.

2. *Coal Oil*.—Reference to investigations made into the possibility of establishing plants for the production of oil from coal is made in previous issues of the Official Year Book.

3. *Natural Oil*.—(i) *Australia*. Natural oil has been proved to exist in Queensland, Victoria and Western Australia, the best indications being found in Victoria and Queensland. Many of the conditions favourable to the accumulation of oil in commercial quantities have been shown to be present in Queensland, Western Australia and New South Wales. In the latter State, however, no strong positive evidence of its existence has been recorded. Oil has been proved to occur in noteworthy quantities at Lakes Entrance, Victoria, but it still remains to be demonstrated whether the area can be developed on a commercial basis.

Reference is made in § 16 below to the assistance afforded by the Commonwealth Government in the search for petroleum oil.

(ii) *Victoria*. There has been no production of crude petroleum oil in Victoria since 1940. The total production to the end of that year was 115,283 gallons, valued at £2,769. Two experts who were engaged by the Commonwealth Government to investigate the oil-producing area of Gippsland expressed the opinion that production on a commercial scale could be established and drilling has been continued in this area since 1941 in accordance with their recommendations. Boring for oil in the Nelson area was carried out during the years 1942 to 1945.

(iii) *Queensland*. Great hopes are still entertained in regard to the petroliferous area in Queensland. Gas and light to medium gravity oils have been found at Roma, and gas and oily wax at Longreach. Structural conditions favourable to accumulation

on a commercial scale have been located at several places between Injune and Springsure. The search for oil was continued during 1939 by several companies in localities situated at Mount Bassett, near Roma, at Hutton Creek and at Arcadia. Test bores have been drilled in all the localities mentioned, the deepest being that at Arcadia which exceeded 6,000 feet. Showings of petroliferous gas, amounting at Arcadia to 3,000,000 cubic feet a day, and of petroleum have been encountered in all these bore-holes.

During 1947 geological, geophysical and aerial surveys were undertaken in the south-western areas, in central Queensland and in the Roma area by various companies, but no drilling was done.

(iv) *South Australia.* Under prescribed conditions, the South Australian Government offers a bonus of £5,000 to the person or body corporate which first obtains from a local bore or well 100,000 gallons of crude petroleum containing not less than 90 per cent. of products obtainable by distillation.

Geophysical surveys were undertaken by private interests during 1947 and continued into 1948, in the north-east corner of the State and extending over the border into New South Wales and Queensland. Assistance given by the Commonwealth included equipment and a geophysical survey party.

(v) *Western Australia.* Only one company was active in Western Australia during 1939. The company, financially assisted by the Commonwealth and State Governments, commenced deep-drilling operations in the Kimberley district in 1939. During 1947 the Geological Survey of Western Australia authorized participation in the oil survey of the Fitzroy Basin, West Kimberley District, in conjunction with the Mineral Resources Bureau. No production had been recorded up to the end of 1947.

(vi) *General.* During 1939 efforts were made to secure greater uniformity in State legislation governing the search for oil. A draft Bill based on modern legislation in other countries was prepared by the Commonwealth and submitted to the State Governments. As a result amending legislation was passed in Victoria, Queensland, South Australia and Western Australia. There was immediate response to this in Queensland, where an agreement has been reached between the State Government and one of the major oil companies, whereby the company has undertaken to spend up to £400,000 in the search for oil in that State.

Further details of action taken by the Commonwealth Government in connexion with the search for oil will be found in § 16. "Government Aid to Mining".

§ 13. Other Non-metallic Minerals.

A more or less detailed statement regarding the occurrence and production of other non-metallic minerals is given in preceding issues of the Official Year Book (*see* No. 22, pp. 793-6). The tables of quantities and values in § 1 of this Chapter show the production of the principal items in this class for each State during 1947.

§ 14. Gems and Gemstones.

1. *Diamonds.*—It is difficult to secure accurate returns in connexion with the production of precious stones, but the yield of diamonds in 1947 in New South Wales was estimated at 73 carats, valued at £215. These were won by fossickers in the Inverell district. The total production to the end of 1947 is given at 206,952 carats, valued at £150,799.

2. **Sapphires.**—The production of sapphires in New South Wales during 1929 was returned as 65 oz., valued at £450, obtained wholly at Sapphire in the Inverell district, and the only output recorded since that year was 1,200 oz., valued at £600, in 1941; 248 oz., valued at £124, in 1943; 125 oz., valued at £283, in 1945; 1,838 oz., valued at £908, in 1946; and 510 oz., valued at £570, in 1947.

In Queensland, gems to the value of £3,540 were won in 1947. It is probable that many gems were sold privately or held for better prices and for these reasons the returns are considered to be very incomplete. There were about 120 miners operating on the fields during 1934 but only 28 at the end of 1947. Production has declined very considerably since 1920, when the yield was valued at £66,000.

3. **Precious Opal.**—The estimated value of the opal won in New South Wales during 1947 was £1,000. This is not regarded as the total output of the State, however, because in many instances miners, buyers and collectors leave the fields before a record of their production or purchases can be secured. Some very fine stones are at times obtained, one weighing 5 ozs. and valued at £300 being found in 1911. Three finds of large stone were made in 1928, the gems weighing 790, 590 and 232 carats respectively and showing fine fire and lustre. Occasionally black opals of very fine quality are found, one specimen from the Wallungulla field, weighing 6½ carats, being sold in 1910 for £102, while in the early part of 1920 a specimen realized £600. It is stated that this locality is the only place in the world where the "black" variety of the gem has been found. The total value of opal won in New South Wales since 1890 is estimated at £1,643,476, but, as pointed out above, the figures are to some extent understated.

In Victoria small quantities of precious opal are found in the Beechworth district.

The opaliferous district in Queensland stretches over a considerable area of the western interior of the State, from Kynuna and Opalton as far south as Cunnamulla. The yield in 1947 was estimated at £307, and up to the end of that year, at about £188,000. These figures are, however, merely approximations, as large quantities of opal, of which no record is obtained, are disposed of privately. The greatest recorded output was for the year 1895 when the yield was valued at £32,750.

Owing to the poor market for gems, production from the Coober Pedy opal field, situated in the Stuart Range in South Australia, fell from £11,056 in 1929 to £1,517 in 1934. The production rose in 1937 to £11,887, but declined to £6,020 in 1939, and rose again to £11,568 in 1941. After a further drop in 1942, to less than £6,000, the value of production rose in 1947 to £61,569, the greatest annual production ever recorded. The field is extremely prolific, a large quantity of precious white opal having been raised therefrom, and only a small portion of the known opal-bearing area has been thoroughly tested.

4. **Other Gems.**—Various other gems and precious stones have from time to time been discovered in the different States, the list including agates, amethysts, beryls, chialstolite, emeralds, garnets, moonstones, olivines, rubies, topazes, tourmalines, turquoises and zircons. In Western Australia, 609 carats (rough) of emeralds, valued at £278 were produced during 1929 in the Cue district on the Murchison gold-field. The value of the 3,750 carats reported from the same area in 1930 was not ascertainable as there were no sales during the year. There has been no recorded production since 1930. During the three years 1939, 1940 and 1941, 10 tons of beryl ore, valued at £83, were produced in Western Australia. There was no production in 1942, but since that year 515 tons, valued at £14,504, were produced in 1943; 387 tons, valued at £12,602, in 1944; 34 tons, valued at £952, in 1945; 15 tons, valued at £581, in 1946; and 45 tons, valued at £1,525, in 1947. Beryl is required chiefly for special alloys with copper which are used in the manufacture of castings, non-sparking tools and special diamond-drill bits.

§ 15. Number Engaged, Wages Paid and Accidents in Mining.

1. Total Employment in Mining.—The number of persons engaged in the mining industry in Australia fluctuates according to the season, the price of industrial metals, the state of the labour market, and according to the permanence of new finds and the development of the established mines. During 1947 the number so engaged was as follows :—

NUMBER OF PERSONS ENGAGED IN MINING, 1947.

State.	Number of Persons engaged in Mining for—						Total.
	Gold.	Silver, Lead and Zinc.	Copper.	Tin.	Coal.	Other.	
New South Wales ..	795	5,331	184	523	17,614	1,555	26,002
Victoria ..	1,135	..	..	..	1,454	61	2,650
Queensland ..	1,834	994	48	528	3,337	283	7,024
South Australia ..	50	12	..	..	124	1,057	1,243
Western Australia ..	7,649	..	2	9	1,032	563	9,255
Tasmania ..	14	523	733	627	288	214	2,399
Northern Territory ..	176	2	15	52	..	174	419
Australia ..	11,653	6,862	982	1,739	23,849	3,907	48,992

(a) Includes 594 engaged in mining for brown coal.

Included in the figures for "other" in South Australia were 188 engaged in mining iron ore, 86 gypsum miners, 207 salt gatherers, and 240 opal miners. The Tasmanian figures include 154 scheelite miners and 14 osmiridium miners. The Northern Territory figures include 92 wolfram and 72 mica miners.

The following table shows, at intervals since 1911, the number of persons engaged in mining in each State and the proportion so engaged of the total population :—

NUMBER ENGAGED IN MINING PER 100,000 OF POPULATION.

State.	1911.		1921.		1931.	
	Miners engaged.	No. per 100,000 of Popu- lation.	Miners engaged.	No. per 100,000 of Popu- lation.	Miners engaged.	No. per 100,000 of Popu- lation.
New South Wales ..	37,017	2,225	29,701	1,410	30,682	1,200
Victoria ..	15,986	1,210	5,211	339	6,463	359
Queensland ..	13,201	2,147	5,847	766	6,753	730
South Australia ..	6,000	1,457	2,020	406	518	90
Western Australia ..	16,596	5,787	7,084	2,122	7,147	1,653
Tasmania ..	5,247	2,760	3,170	1,486	3,397	1,512
Northern Territory ..	715	21,595	131	3,356	145	2,918
Australia ..	94,762	2,109	53,164	974	55,105	844

NUMBER ENGAGED IN MINING PER 100,000 OF POPULATION—*continued.*

State.	1941.		1946.		1947.	
	Miners engaged.	No. per 100,000 of Population.	Miners engaged.	No. per 100,000 of Population.	Miners engaged.	No. per 100,000 of Population.
New South Wales ..	27,554	984	25,082	852	26,002	871
Victoria ..	4,839	250	2,919	144	2,650	129
Queensland ..	6,541	631	6,056	555	7,024	635
South Australia ..	928	154	1,031	162	1,243	192
Western Australia ..	14,021	2,958	8,567	1,739	9,255	1,840
Tasmania ..	2,974	1,237	2,385	946	2,309	931
Northern Territory ..	424	4,125	322	3,047	419	3,847
Australia ..	57,281	806	46,362	621	48,992	646

The upward movement in the number of miners engaged which commenced in 1930 reached a peak of 998 per 100,000 of population in 1937 but from that year until 1945 the ratio declined as follows:—1938, 957; 1939, 944; 1940, 880; 1941, 806; 1942, 696; 1943, 636; 1944, 601; 1945, 569. Since the end of the 1939-45 War the ratio has increased to 621 in 1946 and 646 in 1947.

2. **Wages Paid in Mining.**—Information regarding rates of wages paid in the mining industry is shown in the *Labour Report* issued by this Bureau.

3. **Accidents in Mining, 1947.**—The following table gives particulars of the number of men killed or injured in mining accidents during 1947:—

MINING ACCIDENTS, 1947.

Mining for—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
KILLED.								
Coal ..	(a) 16	(b) 1	3	..	..	..	..	20
Copper ..	..	..	..	..	..	..	..	..
Gold ..	1	1	..	..	18	..	..	20
Iron ..	..	..	..	1	..	..	..	1
Silver, lead and zinc ..	6	..	..	..	..	..	..	6
Tin ..	..	..	..	..	..	..	..	..
Other minerals ..	1	3	..	..	..	..	..	4
Total ..	24	5	3	1	18	..	..	51

(a) Includes shale. (b) Brown coal.

INJURED.

Coal ..	(a) 82	(b) 13	197	7	281	4	..	584
Copper ..	..	..	(c) 57	..	..	4	..	61
Gold ..	24	6	32	..	763	..	2	827
Iron ..	..	..	..	4	..	..	..	4
Silver, lead and zinc ..	45	..	67	..	..	11	..	123
Tin ..	..	..	..	..	..	3	1	4
Other minerals ..	9	14	1	7	(d) 12	..	..	43
Total ..	160	33	354	18	1,056	22	3	1,646

(a) Includes shale, pyrites.

(b) Includes 2 in brown coal.

(c) Copper and gold.

(d) Gold and

§ 16. Government Aid to Mining, and Mineral Control.

1. **Aid to Mining.**—(i) *Commonwealth.* (a) *General.* The Precious Metals Act 1926, the Gold Bounty Act 1930, the Loan Appropriation (Unemployment Relief) Act 1934, the Northern Australian Survey Act 1934 and the Gold Mining Encouragement Act 1940, mentioned in the previous issue of the Official Year Book, either have become inoperative or have been superseded. The Petroleum Oil Search Act 1936 is still in force. Further expenditure under the Gold Mining Encouragement Act is not contemplated, as an entirely new method of providing financial assistance to the mining industry is in operation, and is described below. Similarly no further expenditure is contemplated under the Petroleum Oil Search Act 1936, except for two projects not yet completed, and the Government policy now is to conduct geological and geophysical surveys of possible oil fields (*see below*).

Applications for financial assistance for the development of mining projects which offer promise of contributing materially to the economic welfare of the Commonwealth may be considered by the Bureau of Mineral Resources and the Treasury after consultation with the State concerned. This policy supersedes that set out in Official Year Book No. 37, page 849—the Australian Mining Council which was to have been set up under the previous policy has not met or fulfilled any of its functions and its creation was not finalized.

The Commonwealth Government in 1948 decided to provide financial assistance to certain gold mines in remote and isolated parts of Western Australia. These mines were experiencing difficulty because income from the fixed price for gold was insufficient to cover higher operating costs due to a number of factors, including the general rise in the level of wages and prices. Before granting assistance, the mine, its financial position and its relation to the economic and social welfare of the district were investigated by officers of the Bureau of Mineral Resources and the Treasury in collaboration with the State Mines Department, and conditions which should be observed in order to obtain financial assistance were laid down. Assistance as decided in 1948 was in the form of periodical payments sufficient to cover the difference between revenue and expenditure and to provide a return of 4 per cent. on the paid-up capital of the Company, but in 1949 this was increased to 6 per cent. At the same time the assistance scheme was extended to enable gold mines in remote areas of other States to participate. The scheme was terminated on the devaluation in September, 1949 of the Australian pound in terms of the United States of America dollar, which had resulted in a rise of £4 14s. 7d. per fine ounce in the Australian price of gold.

(b) *Rewards for discovery of Uranium Ore.* To encourage the search for and discovery of deposits of uranium ore, the Commonwealth Government has approved the granting of monetary rewards. These rewards will be paid as follows:—(1) £1,000 for the discovery of a deposit containing sufficient ore to be of economic importance; (2) £1,000 for the discovery of a deposit capable of producing 25 tons or more of uranium oxide and £2,000 for any excess over 25 tons; and (3) a maximum of £25,000 for any one deposit.

(c) *Bureau of Mineral Resources.* The Bureau of Mineral Resources, Geology and Geophysics has sections dealing with geology and geophysics, mining engineering, petroleum technology and mineral economics. The geological section conducts all surveys required in Commonwealth Territories, detailed and regional surveys in conjunction with or by arrangement with the State Mines Departments, surveys of possible oil-fields in Australia and New Guinea, surveys of mines for which financial assistance is sought, and investigations of deposits of radio-active minerals. The geophysical section conducts investigations connected with the search for metalliferous, radio-active and other mineral deposits; problems connected with exploration of coal, oil and water; regional magnetic and gravity surveys; and engineering and military geophysics. The Bureau works in close co-operation with the Mines Departments of the States. The Bureau has assumed full responsibility for geological and geophysical surveys in Commonwealth Territories, but suitable arrangements have been made to ensure that the local Administrations have the necessary technical advice directly available to them.

(d) *Diamond Drills.* The four diamond drills mentioned in the previous Official Year Book have arrived in Australia and are available for hire by mining companies.

(e) *Search for Oil.* No variation has been made in the policy described in Official Year Book No. 37, page 850, regarding the search for petroleum throughout Australia and its Territories. In addition to the activities of the Bureau of Mineral Resources, Geology and Geophysics set out in that Year Book, it furnishes field laboratories and trained personnel to assist small companies in recording scientific information obtained while drilling for oil.

The Commonwealth Government has encouraged the search for oil in Australia, Papua and New Guinea; details of the efforts made are outlined in previous issues of the Official Year Book. A considerable amount of geological work and test drilling was conducted under the provision of the Petroleum Oil Search Act 1936 and, at the outbreak of the 1939-45 War, two tests were partially completed, one at Oiapu in the Gulf district of Papua and the other at Nerrima in the Kimberley district of Western Australia. At Nerrima, the Freney Kimberley Oil Co. (1932) N.L. rejected a Commonwealth offer of financial assistance. The company is now drilling with financial assistance from the Government of Western Australia, using a drilling plant hired from the Commonwealth; technical advice and assistance is also provided by the Commonwealth.

(f) *Survey of North Australia.* Reference to this survey which was completed at the end of 1940 appears in Official Year Book No. 35, page 744. A few reports on individual areas remain to be printed.

(g) *Mining Industry Advisory Panel.* This panel has not functioned since 1946. During the year, the Bureau of Mineral Resources continued the investigation, recommended by the Panel, into the possibility of arranging uniform legislation in the States and Territories in connexion with health and safety in mines.

(h) *Standing Committee on Liquid Fuels.* This Committee has become inoperative.

(i) *Ore-dressing and mineragraphic investigations.* These investigations are conducted by the Commonwealth Scientific and Industrial Research Organization as required by the industry. Ore-dressing investigations are carried out conjointly with appropriate State institutions, the three laboratory centres being the School of Mines, Kalgoorlie, the School of Mines and Industries, Adelaide, and the University of Melbourne.

The grant of £22,000 mentioned in Official Year Book No. 37, page 851, was expended by 1947; since that year funds to continue the investigations are included in an investigational vote approved annually for the Commonwealth Scientific and Industrial Research Organization. In 1948 the Government expended approximately £5,000 on ore-dressing and £6,100 on mineragraphic investigations.

(ii) *States.* (a) *General.* In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining industry where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and in general give a free technical service to the mining industry.

(b) *New South Wales.* State aid to assist metalliferous mining consisted of grants to assist the prospecting and/or mining for gold and minerals and for the purchase, removal and installation of mining plant or equipment. In 1948, this assistance totalled £4,705, the greater part of which was granted to prospect or mine for either tin or gold.

(c) *Victoria.* In 1948, £5,368 was granted by the State to assist the gold-mining industry. Grants may be made to assist prospecting and development or the purchase of machinery. The Mines Department has 24 stamp batteries in different parts of the State to crush ore for prospectors at nominal rates. Small mining companies may avail themselves of these facilities.

(d) *Queensland.* The Mines Department maintains a treatment works for tin ores, etc. at Irvinebank, an assay office at Cloneerry and diamond-drilling plants in several parts of the State. The Venus State Mill at Charters Towers is available for

the treatment of gold-bearing ores and another State battery is located at Kidston. In addition, many departmental compressor plants, pumping plants and other mining equipment are provided and made available on hire on the principal mining fields. Financial aid granted to prospectors for 1948 amounted to £11,695, whilst other forms of aid for mining granted by the State amounted to £7,505 for the same period.

(e) *South Australia.* During 1940 the Premier announced that assistance would be given to copper mining in the form of financial help towards such development work as was absolutely necessary for the mine to enter upon reasonably continuous production. On 5th November, 1942, the Leigh Creek Coal Act was passed to develop the Leigh Creek Coalfield. As a result of extensive drilling operations, development of open-cut mining was commenced in January, 1943. Production from the open-cuts to December, 1948 amounted to 645,997 tons. State aid to mining during 1948 totalled £58,567, of which £11,350 was for coal, £4,304 for copper, £6,285 for gold, and the balance, £36,628, for other minerals. The State maintains batteries and cyanide works at Mount Torrens, Peterborough, Mongolatta, Tarcoola, and Glenloth, and assays for public purposes are made at the School of Mines.

(f) *Western Australia.* Financial aid granted to prospectors and others in 1948 amounted to £40,799; this sum was allotted as follows:—oil, £15,000; lead, £10,000; gold, £4,049; coal, £1,199; vermiculite, £656; tin, £139; other forms of assistance, £9,756. The Mines Department has about twenty batteries throughout the mining fields where prospectors and others can have their ore treated.

(g) *Tasmania.* During 1948 the Department of Mines reported that the policy of assistance to mining was maintained to the extent provided for under the provisions of the Aid to Mining Act but no material advantage was taken thereof. In that year £75 was expended and £493 was repaid against advances previously made.

Other assistance rendered to the industry is provided by a well-equipped metallurgical laboratory at Launceston where ore-dressing and other metallurgical problems can be investigated for the mine-owner and advice given regarding the most suitable type of plant to instal.

(h) *Northern Territory.* The Commonwealth Government has maintained a 10-head battery at Tennant Creek for the treatment of ore by miners. Another battery has been leased. A 10-head battery is situated on the Maranboy tin-field and crushes ore for all parties on the field. Assistance has been given to miners on the mica fields to purchase air-compressors and other mining plant on liberal terms. The Commonwealth Government has purchased all mica produced on the fields. Roads and water supply services are provided and maintained for all mines and mineral-producing areas throughout the Territory.

2. **Control of Minerals.**—(i) *Minerals Committee, and Controller of Minerals Production.* With the termination of the war the activities of the Controller of Minerals Production, appointed under the provision of the National Security (Minerals) Regulations, were reduced. In 1948, operations conducted by the Controller were the Dorset Tin Dredge in Tasmania and the acquisition and sale of mica produced in Australia.

(ii) *Mica Production.* The Commonwealth Government extended to 31st December, 1949, its authority to acquire the mica produced in Australia at a price fixed by the Prices Commissioner.

(iii) *Control of Exports of Metals and Minerals.* In order to conserve supplies and to direct surpluses to destinations where most needed, export controls were initiated in 1946. Metals, etc., controlled include copper and copper alloys; iron, steel and scrap; all non-ferrous scrap; zinc dross and dust; antimony metal and concentrates; metallic tin, tin concentrates and ores; and pig lead and scrap and manufactured lead.

(iv) *Atomic Energy (Control of Materials) Act 34 of 1946.* This Act provides for control of substances which could be used for production or use of atomic energy. It gives the Commonwealth power to acquire such substances in their natural state and in waste materials from mining operations, to carry on mining and other operations necessary

for the recovery of such substances, and to pay compensation for such acquisition. It also gives the Commonwealth power to obtain possession of such substances held by any person.

The Act provides for the notification of discovery of any such substances or mineral containing such substance.

§ 17. Metallic Contents of Ores and Concentrates Produced.

According to returns compiled by the Australian Mines and Metals Association from records supplied by companies associated with mineral production and by State Departments of Mines, the metallic contents (excluding gold) of ores and concentrates produced in Australia during the years 1939 and 1944 to 1948 were as follows:—

METALLIC CONTENTS OF ORES AND CONCENTRATES PRODUCED IN AUSTRALIA.

Metal.		1939.	1944.	1945.	1946.	1947.	1948.
Silver	oz.	15,320,116	9,365,726	8,076,740	9,045,280	9,527,140	10,057,519
Lead, Pig	tons	280,003	189,485	164,741	183,835	196,623	216,955
Zinc	"	217,256	174,358	150,313	171,910	182,258	190,460
Copper	"	20,560	28,056	24,520	17,755	13,123	12,368
Tin	"	3,067	2,547	2,282	2,127	2,445	1,874

The production of pig-iron in New South Wales and South Australia—the only producing States until 1947–48 when production was commenced in Western Australia—reached its peak in 1941–42 when 1,557,641 tons were produced compared with 1,104,605 tons in 1938–39. Production had declined by 1945–46 to 906,283 tons but rose again in 1946–47 to 1,143,132 tons, and to 1,235,574 in 1947–48, including 771 tons, the output of Western Australia.

CHAPTER XIX.

PASTORAL PRODUCTION.

§ 1. Initiation and Growth of Pastoral Industry.

1. **General.**—A detailed account of the various enumerations of live stock in Australia made prior to 1860 is given in previous issues of the Year Book. The numbers recorded between 1800 and 1860 are regarded as somewhat defective. Doubtless the growth of population, the expansion in the area settled and the increase in private ownership made it difficult in those early times to secure accurate returns. Since 1860 however, the annual enumerations have been based, with few exceptions, on actual collections made through the agency of the State Police and reliably record the movement in live stock numbers from year to year.

2. **Live Stock Numbers since 1860.**—Particulars concerning the numbers of each of the principal kinds of live stock in Australia at decennial intervals from 1860 to 1930, and from 1939 onwards in single years are given in the following table, and are shown continuously on the graph on page 862.

During the eighty-nine years from 1860 to 1949, the livestock of Australia increased considerably, horses, 158 per cent; cattle, 257 per cent; sheep, 440 per cent; and pigs, 241 per cent. The average annual increases which these aggregates represent are as follows:—Horses, 1.07 per cent; cattle, 1.44 per cent; sheep 1.91 per cent; and pigs, 1.39 per cent.

LIVE STOCK : AUSTRALIA.

Year.				Horses.	Cattle.	Sheep.	Pigs.
1860	..	..	..	431,525	3,957,915	20,135,286	351,096
1870	..	..	..	716,772	4,276,326	41,593,612	543,388
1880	..	..	..	1,068,774	7,527,142	62,184,252	815,776
1890	..	..	..	1,521,598	10,299,816	97,881,221	891,138
1900	..	..	..	1,609,654	8,640,225	70,602,995	950,349
1910	..	..	..	2,165,866	11,744,714	98,066,046	1,025,850
1920	..	..	..	2,415,510	13,499,737	81,795,727	764,406
1930	..	..	..	1,792,734	11,720,916	110,568,279	1,071,679
1939	..	..	..	1,724,056	12,861,781	111,057,832	1,155,591
1940	..	..	..	1,698,797	13,080,180	119,305,391	1,455,341
1941	..	..	..	1,665,616	13,255,841	122,694,025	1,797,340
1942	..	..	..	1,611,059	13,560,754	125,189,129	1,477,303
1943 (31st March)	..	..	..	1,517,970	14,005,320	124,614,672	1,563,000
1944	"	"	..	1,449,199	14,183,679	123,173,962	1,746,721
1945	"	"	..	1,359,205	14,133,167	105,370,865	1,630,855
1946	"	"	..	1,265,398	13,878,006	96,396,405	1,425,709
1947	"	"	..	1,195,175	13,426,646	95,722,782	1,273,011
1948	"	"	..	1,164,650	13,784,584	102,558,650	1,254,683
1949	"	"	..	1,114,500	14,123,610	108,735,432	1,196,321

3. **Fluctuations.**—The increases referred to, however, have not been continuous, marked fluctuations having taken place during the period, mainly on account of droughts which have from time to time left their impress on the pastoral history of Australia. These occurred in 1868, 1877, 1883-4, 1892, 1893, 1895, 1901-2, 1912, 1914, 1918, 1919, 1922-23, 1925-26, 1927-28, 1929-30, 1940-41 and 1944-45 to 1946-47.

The years in which the numbers of live stock attained their maxima are as follows:—Horses, 1918 (2,527,149); cattle, 1921 (14,441,309); sheep, 1942 (125,189,129); and pigs, 1941 (1,797,340).

4. **Live Stock in Relation to Population.**—The number of each kind of live stock per head of the population of Australia has varied since 1860 as shown in the following table:—

LIVE STOCK PER HEAD OF POPULATION: AUSTRALIA.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 ..	0.38	3.45	17.58	0.31	1941 ..	0.23	1.87	17.28	0.25
1870 ..	0.43	2.60	25.24	0.33	1942 ..	0.22	1.89	17.46	0.21
1880 ..	0.48	3.37	27.87	0.37	1943 (a) ..	0.21	1.94	17.24	0.22
1890 ..	0.48	3.17	31.06	0.28	1944 (a) ..	0.20	1.94	16.83	0.24
1900 ..	0.43	2.29	18.75	0.25	1945 (a) ..	0.18	1.92	14.33	0.22
1910 ..	0.49	2.65	22.16	0.23	1946 (a) ..	0.17	1.87	12.97	0.19
1920 ..	0.44	2.49	15.11	0.14	1947 (a) ..	0.16	1.78	12.70	0.17
1930 ..	0.28	1.81	17.07	0.17	1948 (a) ..	0.15	1.80	13.37	0.16
1939 ..	0.25	1.87	16.11	0.16	1949 (a) ..	0.14	1.80	13.86	0.15
1940 ..	0.24	1.86	16.97	0.21					

(a) 31st March.

5. **Live Stock in Relation to Area.**—The number of live stock per square mile in the several States and Territories of Australia is given in the following table:—

LIVE STOCK PER SQUARE MILE, 1949.

State or Territory.	Horses.	Cattle.	Sheep.	Pigs.
New South Wales	1.16	10.51	162.89	1.21
Victoria	2.42	25.31	218.13	2.55
Queensland	0.48	8.94	24.61	0.61
South Australia	0.25	1.21	24.64	0.19
Western Australia	0.07	0.89	11.14	0.08
Tasmania	0.85	10.16	82.40	1.41
Northern Territory	0.06	2.01	0.05	0.00
Australian Capital Territory	1.00	10.70	253.29	0.50
Australia	0.37	4.75	36.55	0.40

On pages 895-8 there are graphs which show the distribution throughout Australia of beef cattle, dairy cattle, sheep and pigs as at 31st March, 1948.

BEEF CATTLE NUMBERS

New South Wales	1,842,000
Victoria	698,000
Queensland	4,593,000
South Australia	170,000
West Australia	590,000
Tasmania	100,000
Northern Terr	991,000
Aust. Cap Terr	6,000
Total	<u>8,990,000</u>



**BEEF CATTLE DISTRIBUTION
AUSTRALIA 31ST MARCH 1948**

Each dot represents 2,500.

SCALE OF MILES
0 50 100 200 300

DAIRY CATTLE NUMBERS

New South Wales	(a) 1,288,000
Victoria	1,476,000
Queensland	1,383,000
South Australia	275,000
West Australia	225,000
Tasmania	144,000
Aust. Cap. Terr.	3,000
Total	4,794,000

(a) Number in registered dairies plus 145,000 other milking cows not in registered dairies

DAIRY CATTLE DISTRIBUTION
AUSTRALIA 31ST MARCH 1948

Each dot represents 2,500.

SCALE OF MILES
0 50 100 200



SHEEP NUMBERS

New South Wales	46,065,000
Victoria	17,931,000
Queensland	16,743,000
South Australia	9,055,000
West Australia	10,444,000
Tasmania	2,087,000
Northern Terr	19,000
Aust. Cap. Terr	215,000
Total	<u>102,559,000</u>



**SHEEP DISTRIBUTION
AUSTRALIA 31ST MARCH 1943**

Each dot represents 20,000.

SCALE OF MILES
0 50 100 200 300

PIG NUMBERS

New South Wales . . .	365,200
Victoria	271,500
Queensland	378,100
South Australia . . .	100,300
West Australia . . .	93,200
Tasmania	45,100
Northern Terr. . . .	700
Aust. Cap Terr. . . .	600
Total	<u>1,254,700</u>



6. **Minor Classes of Live Stock.**—Excluding Victoria, where the details are not available, the numbers of minor classes of live stock returned for 1941 were as follows :—Goats, 80,366; camels, 2,267; and mules and donkeys, 10,881. Of these, goats were most numerous in Queensland, and camels, mules and donkeys in Western Australia. In the raising of goats, some attention has been devoted to the angora goat and its product (mohair), and upwards of 5,000 angora goats are included in the number shown above. Of these, 1,640 were in New South Wales, 1,000 in Queensland, 1,531 in South Australia, and 284 in Tasmania. Details for later years were not collected.

7. **Net Exports of Principal Pastoral Products.**—The quantities by which the exports of the principal pastoral products of Australia exceeded the imports for the years 1938–39 and 1944–45 to 1947–48 were as follows :—

NET EXPORTS OF PASTORAL PRODUCTS : AUSTRALIA.

Product.	Unit of Quantity.	1938–39.	1944–45.	1945–46.	1946–47.	1947–48.
Animals (living)—						
Cattle	No.	405	1,173	284	670	4,256
Horses	"	2,294	—47	—32	617	579
Sheep	"	66,739	2,502	21,117	79,576	78,836
Bones	Cwt.	21,497	—116	348	14,954	31,433
Glue-pieces and Sinews ..	"	—11,145	583	6	—1,549	—5,647
Glycerine	lb.	78,727	1,498	4,640,683	2,411,368	—14,757
Hair	"	—1,003,366	—348,375	—215,422	—635,592	40,009
Hoofs	Cwt.	(a)	(a)	811	7,659	11,604
Horns	"	(a)	(a)	6,998	5,684	9,991
Meats—						
Frozen Beef and Veal (b)	lb.	271,948,548	63,147,258	110,791,330	180,338,464	237,150,099
" Mutton and Lamb ..	"	186,487,551	146,794,392	56,574,651	164,276,349	122,476,343
" Rabbits and Hares ..	Pair	(a)	(a)	1,331,935	5,385,354	12,684,901
" Other	lb.	19,588,368	55,005,567	15,321,636	19,514,725	26,677,915
Potted and Concentrated	"	(a)	(a)	1,067,870	1,038,573	1,364,328
Preserved in Tins, etc. ..	"	14,778,896	78,555,981	102,571,309	111,547,472	91,410,094
Other (excluding Bacon and Ham)	"	308,448	6,309,731	3,317,848	1,422,165	1,897,508
Sausage Casings	Cwt.	8,673	7,485	5,899	8,644	7,308
Skins—						
Cattle	No.	(a)	50,435	72,398	—42,067	30,815
Calf	"	(a)	—57,532	—229,255	—187,325	—43,756
Horse	"	(a)	26,992	27,280	31,577	31,065
Sheep	"	(a)	10,704,646	21,387,543	20,447,119	11,828,587
Rabbit	Cwt.	(c) 37,544	104,127	131,633	118,050	105,333
Other (including dressed Furs) ..	No.	(a)	(a)	652,046	931,512	—1,022,321
Tallow	Cwt.	560,241	421,573	(d) 146,445	(d) 73,744	(d) 87,689
Wool—						
Greasy	lb.	779,781,662	495,893,452	710,964,148	1,014,823,258	764,835,319
Scoured	"					
Tops	"					
Noils	"	70,299,595	81,665,395	94,459,799	190,308,568	162,362,412
Waste	"					

(a) Quantity not available.
edible and inedible tallow.

(b) Includes chilled beef.

(c) Includes hare skins.

(d) Includes

NOTE.—Minus sign (—) signifies net imports.

The values of the net exports for the same five years are furnished in the next table. For the four years ended 1947–48 they amounted to £A.486,723,163, or an average of £A.121,680,791 per annum, of which wool represented 78.9 per cent. Meat, skins and tallow comprise the remaining principal pastoral products exported. Net exports in 1938–39 were valued at £56,290,910 of which wool represented 74.56 per cent.

VALUE OF NET EXPORTS OF PASTORAL PRODUCTS : AUSTRALIA.

(£A. f.o.b.)

Product.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
Animals (living)—					
Cattle	989	7,167	—22,809	—27,970	44,207
Horses	—14	—47,626	—120,949	—153,076	—66,763
Sheep	43,443	—10,767	12,266	99,874	127,806
Bones	10,909	12	489	25,560	42,731
Glue-pieces and Sinews	—7,087	202	93	—2,971	—11,748
Glycerine	—1,307	97	138,651	223,162	—839
Hair	—7,280	—47,467	—9,004	—431,424	—420,741
Hoofs	8,027	..	577	12,044	18,700
Horns	18,633	488	14,184	14,210	19,867
Meats—					
Frozen Beef (a)	4,323,275	1,663,102	2,833,983	4,581,873	6,192,615
" Mutton and Lamb	4,807,423	3,943,083	1,540,419	4,543,474	4,248,560
" Rabbits and Hares	232,034	174,980	145,844	660,500	1,865,473
" Other	419,269	434,121	451,724	591,494	935,421
Potted and Concentrated	—28,025	99,485	155,048	313,499	347,102
Preserved in Tins, etc.	493,489	1,503,596	5,877,621	6,826,234	5,567,429
Other (excluding Bacon and Ham)	6,355	757,737	237,066	87,420	100,845
Sausage Casings	209,280	110,645	126,320	109,457	137,085
Skins—					
Cattle	662,203	7,177	—46,438	—168,110	163,796
Calf	131,227	—34,452	—140,043	—229,022	—55,970
Horse	7,202	34,119	43,609	75,681	70,013
Sheep	2,339,703	1,830,226	4,552,860	7,391,639	7,423,025
Rabbit	(b) 396,830	3,864,263	6,290,693	6,066,800	3,954,654
Other (including Undressed Furs)	—226,376	445,221	574,920	592,344	—582,045
Tallow	480,744	669,566	(c) 303,478	(c) 355,328	(c) 572,818
Wool—					
Greasy	36,688,235	38,673,092	56,370,430	96,464,590	117,880,963
Scoured, Tops, etc.	5,281,729	10,641,506	12,864,480	29,223,353	29,970,640
Total Values	56,290,910	64,719,573	92,195,512	157,245,963	178,545,644

(a) Includes chilled beef.

(b) Includes hare skins.

(c) Includes edible and inedible tallow.

NOTE.—The minus sign (—) signifies net imports.

8. Value of Pastoral Production.—(i) *General.* Particulars of the gross, local and net values of pastoral production for each State are shown for 1946-47 and 1947-48 in the following table. Fuller details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter XXVIII. "Miscellaneous". Maintenance costs have not been computed in all States and depreciation has not been deducted; consequently the net values are inflated to the extent of these costs.

GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION, 1946-47 AND 1947-48.
(£.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Production. (a)
				Seed used, and Fodder for Farm Stock.	Value of other materials used in process of Production.	

1946-47.

New South Wales	58,012,000	4,153,000	53,869,000	912,000 (b)	291,000	52,666,000
Victoria ..	32,426,683	2,435,709	29,990,974	500,000	852,431	28,638,543
Queensland ..	30,469,000	2,840,000	27,629,000	1,100,000	440,000	26,089,000
South Australia	11,301,188	1,283,054	10,018,134	116,778	316,428	9,584,928
Western Aust.	10,992,958	805,617	10,187,341	162,613	376,777	9,647,951
Tasmania ..	3,933,410	172,070	3,761,340	125,020 (b)	56,060	3,580,260
Total ..	147,145,239	11,689,450	135,455,789	2,916,411	2,332,696	130,206,682

1947-48.

New South Wales	82,912,000	4,947,000	77,965,000	953,000	390,000	76,622,000
Victoria ..	47,144,410	4,154,924	42,989,486	550,000	1,124,938	41,314,548
Queensland ..	43,944,000	4,100,000	39,844,000	1,590,000	640,000	37,614,000
South Australia	18,011,726	1,138,631	16,873,095	114,408	423,903	16,334,784
Western Aust.	18,517,775	1,022,704	17,495,071	122,006	558,184	16,814,881
Tasmania ..	4,860,680	292,690	4,567,990	131,530	88,740	4,347,720
Total ..	215,390,591	15,655,940	199,734,642	3,460,944	3,225,765	193,047,933

(a) No deduction has been made for depreciation and maintenance. (b) No allowances made for costs of power, power kerosene, petrol and other oils.

(ii) *States.* The following table shows the net value of pastoral production by States and the net value per head of population for the years 1943-44 to 1947-48 compared with the average for the years 1934-35 to 1938-39.

VALUE OF PASTORAL PRODUCTION.

Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Total.
-------	--------	------	------	------	------	------	--------

NET VALUE.(a)
(£.)

Average, 1934-35 to 1938-39 ..	30,592,400	16,783,844	13,384,427	4,582,522	4,306,699	1,429,180	71,079,072
1943-44	42,580,000	26,131,703	21,981,000	7,788,705	7,469,954	2,454,560	108,405,922
1944-45	37,452,000	24,445,998	19,993,000	7,695,478	6,514,784	2,339,170	93,440,430
1945-46	34,043,000	18,097,946	18,944,000	6,197,793	6,804,185	2,225,540	86,312,464
1946-47	52,666,000	28,638,543	26,089,000	9,584,928	9,647,951	3,580,260	130,206,682
1947-48	76,622,000	41,314,548	37,614,000	16,334,784	16,814,881	4,347,720	193,047,933

(a) No deduction has been made for depreciation and maintenance.

VALUE OF PASTORAL PRODUCTION—*continued*.

Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Total.
NET VALUE PER HEAD OF MEAN POPULATION.(a)							
(£ s. d.)							
Average, 1934-35 to 1938- 39 ..	11 8 0	9 1 3	13 11 10	7 15 6	9 9 2	6 2 7	10 8 8
1943-44	15 2 10	13 3 8	20 16 10	12 12 9	15 12 3	10 1 1	14 18 2
1944-45	12 18 2	12 4 8	18 14 3	12 7 0	13 8 9	9 9 5	13 7 11
1945-46	11 12 2	8 19 7	17 9 6	9 16 5	13 7 7	8 17 10	11 12 4
1946-47	17 15 5	14 0 10	23 15 7	14 19 4	19 8 1	14 1 3	17 6 3
1947-48	25 9 9	19 19 4	33 16 1	25 0 10	33 0 11	16 12 2	25 5 4

(a) No deduction has been made for depreciation and maintenance.

9. **Consumption of Meats.**—Particulars of the quantity of meat per head per annum available for civilian consumption in Australia, Canada, the United Kingdom and the United States are given in the following table. Canned and cured meat has been included at its carcass weight equivalent.

The sources of the figures for Canada, the United Kingdom, and the United States of America are Food Balance Sheets published by the Food and Agricultural Organization of the United Nations (April, 1949), for the year 1947-48 and Food Consumption Levels in the United States of America, Canada and the United Kingdom—Third Report (1946) of a Special Joint Committee set up by the Combined Food Board—in respect of the earlier periods shown.

The demand for meat during the war years was such as to necessitate the introduction of rationing in order to divert supplies from civilian consumption to the armed services. The rationing of meat (other than bacon and ham, canned meat, sausages and offal) was in operation in Australia from 17th January, 1944 to 21st June, 1948. Details of the ration rates in force over this period are shown in Official Year Book No. 37, p. 858.

QUANTITY OF MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL
AVAILABLE FOR CIVILIAN CONSUMPTION PER HEAD PER ANNUM.

(lb.—in terms of Carcass Weight.)

Country.	Average, Pre-war.	1944.	1945.	1946.	1946-47.	1947-48.
Australia	(a) 253.0	221.0	203.2	203.1	201.7	215.5
Canada	(b) 118.4	149.1	139.7	(d)	(d)	140.7
United Kingdom	(c) 131.7	114.9	106.2	112.7	(d)	106.0
United States of America	(b) 134.1	162.1	135.9	(d)	(d)	160.1

(a) Average for years 1936-37 to 1938-39.
for years 1934 to 1938.

(b) Average for years 1935 to 1939.

(c) Average

(d) Not yet available.

10. **Marketing of Meat.**—(i) *General.* The Meat Export Control Act 1935-1946 was introduced following a decision of a conference of Commonwealth and State Ministers with members of the Commonwealth Meat Advisory Committee, held in October, 1935, to set up a Meat Board with defined statutory powers. The Australian Meat Board, which was appointed under the Act in January, 1936, consisted of eighteen members, representative of producers, processors, exporters and the Commonwealth Government. Provision was made for the appointment from within the Board of an Executive Committee and a Beef Committee. The Act provided for the control of the

export of meat by licence. The Board was empowered to regulate shipments of meat and to arrange contracts in respect of freights and insurances; to promote overseas sales by advertising and to foster research into meat problems; and to supervise the issue of export licences. The Board also has power to appoint a London representative. During the 1939-45 War the control of meat exports was under National Security Regulations which ceased to operate with the expiry of the National Security Act on 31st December, 1946. Control then reverted to the Board, which was reconstituted in August, 1946 by legislation amending the Meat Export Control Act. Membership of the reconstituted Board is on an industry basis in lieu of a State basis and the number of members has been reduced from eighteen to twelve. The powers and functions of the Board were *inter alia* extended to enable it to purchase and sell any meat, meat products or edible offal on behalf of the Commonwealth Government and subject to any direction of the Minister for Commerce and Agriculture.

The Meat Export Charges Act 1935-46 provides for the imposition of a levy on all meats exported from Australia, the funds from which are used for the purpose of defraying expenses and charges incurred by the Australian Meat Board in the course of its business. The customary provision is made for exemption from the levy when recommended by the Board.

(ii) *War-time Marketing.* Details of arrangements for the marketing of meat during the 1939-45 War are given on page 1107 of Official Year Book No. 36.

(iii) *Long-term Purchase Agreement.* An agreement was completed between the Government of the United Kingdom and the Commonwealth Government for the long-term purchase of the exportable surplus of Australian meat for the period 1st October, 1944 to the 30th September, 1948.

The agreement covered all classes of meats, including sundries in the fresh, frozen, and canned forms, for the currency of the agreement, with the exception of pigmeats, whose quantities were determined only until the expiry of the second year of the contract, namely 30th September, 1946. Quantities of the latter class of meat for the two succeeding years of the contract were arranged subsequently by negotiation between the two Governments.

Prices were determined for all classes and cuts of meat for the first two years of the contract, which provided that they could be reviewed prior to specified dates at the instigation of either Government in respect of each of the two final years of the agreement.

Subject to certain conditions the Government of the United Kingdom agreed to reimburse the cost of storage and interest incurred by the Commonwealth Government in connexion with the purchase and storage of such meat after it had been in store 28 days.

The arrangement also provides for ample opportunity to be given to the meat industry of Australia to re-engage in the chilled beef trade with the United Kingdom when the shipping position makes that possible.

A further interesting feature is that the Government of the United Kingdom will consult with the Commonwealth Government regarding the steps necessary to ensure a mutually agreeable distribution of Australian meat in the United Kingdom, and also, when the present scheme of control is withdrawn or modified, will confer with the Commonwealth Government as to the ways and means of securing an orderly resumption of private trading.

The prices originally determined under the long-term purchase arrangement operated until 30th September, 1946, and approximated those which were being paid by the Commonwealth Government under its War-time Meat Purchase Plan. As from 1st October, 1946, rises in prices operated for the new contract year. These rises have been passed on to the producers. Prices for the year ended 30th September, 1948 remained unchanged, except for some minor adjustments.

The original agreement was later extended for a further two years to 30th September, 1950. All prices were increased for the year ended 30th September, 1949, and, in accordance with the terms of the agreement, may be further reviewed for the concluding year.

The Australian and United Kingdom Governments are at present considering a further agreement to cover the purchase of Australia's exportable surplus of meat for a term of fifteen years. The plans under consideration envisage measures to expand Australia's production of meat for export.

§ 2. Horses.

1. *Suitability of Australia for Horse-breeding.*—From the earliest times the suitability of the climate and pastures of Australia for the production of serviceable breeds of horses has been fully recognized. By the importation of high-class sires, and the careful selection of breeding mares, these natural advantages have been utilized to the fullest extent in breeding all classes of horses. As a consequence of this combination of advantages, the Australian horse, whether of the heavy draught, medium weight, or light saddle variety, compares very favourably with the product of other lands.

2. *Distribution throughout Australia.*—The States of New South Wales, Queensland and Victoria together depasture about 80 per cent. of the total number of horses in Australia. In the following table figures are given for each State and Territory for the years 1945 to 1949 in comparison with the average for the years 1935 to 1939 :—

HORSES : NUMBER.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Total.
Average, 1935 to 1939 ..	536,705	354,815	443,977	198,034	154,347	30,859	33,231	1,133	1,753,101
1945 ..	436,443	253,782	380,670	133,003	96,528	25,885	31,803	1,091	1,359,205
1946 ..	403,645	232,473	367,357	115,949	88,180	24,863	31,883	1,048	1,265,398
1947 ..	379,774	227,164	343,172	109,274	80,746	23,925	30,019	1,101	1,195,175
1948 ..	376,943	221,454	335,581	100,619	74,537	23,125	32,318	973	1,164,650
1949 ..	357,764	213,090	324,707	94,071	68,521	22,207	33,197	943	1,114,500

The number of horses attained its maximum in Australia during 1918, when a total of 2,527,149 was recorded. The United States of America made its highest recording in the same year and Canada in 1921. The number in Australia has declined considerably since 1918 owing to the mechanization of transport and farming. During the period 1918 to 1949 the decrease in numbers averaged 45,500 per annum, the rate of decline being 67,000 per annum during the five years ended 1949.

The number of horses in Australia from 1860 onwards may be obtained from the graph on page 862.

The percentages of the number of horses in the several States and Territories on the total for Australia for 1949 were :—New South Wales, 32.10; Victoria, 19.12; Queensland, 29.14; South Australia, 8.44; Western Australia, 6.15; Tasmania, 1.99; Northern Territory, 2.98; and Australian Capital Territory, 0.08 per cent.

3. *Oversea Trade in Horses.*—(i) *Exports.* The export of horses from Australia during the early years of this century was fairly considerable, averaging about 15,000 head per annum between 1901 and 1920, exclusive of those used for war purposes during the 1914–18 War. Since then, exports have gradually declined and averaged only about 4,000 for the five years ended 1938–39 and 484 for the five years ended 1947–48.

(ii) *Imports.* The few horses imported into Australia consist mainly of valuable stud animals from the United Kingdom and racehorses from New Zealand. The average value per head of the horses imported during the five years 1943-44 to 1947-48 was £A.986. The average number imported per annum was, however, only 181, and the average annual value, £A.178,917.

Details of the quantity and value of imports, exports and net exports of horses are shown in the following table for the years 1943-44 to 1947-48 compared with the average for the five years ended 1938-39.

HORSES : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
Average, 1934-35 to 1938-39		£A.f.o.b.		£A.f.o.b.		£A.f.o.b.
1943-44	321	135,459	4,005	139,012	3,684	3,553
1944-45	26	17,937	421	25,753	395	7,816
1944-45	58	50,287	11	2,661	-47	-47,626
1945-46	165	184,880	133	63,931	-32	-120,949
1946-47	317	338,241	934	185,165	617	-153,076
1947-48	341	303,240	920	236,477	579	-66,763

NOTE.—The minus sign (—) signifies net imports.

§ 3. Cattle.

1. *Purposes for which Raised.*—Cattle-raising is carried out in all the States, the main object in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and an improvement in quality of the dairy herds in Victoria, New South Wales, and Southern Queensland in particular, the portion of Australia in the temperate zone being the best adapted to this industry. On the other hand, beef-producing cattle are mainly raised in the tropical districts, i.e., in the northern parts of Queensland, in the Northern Territory, and in the Kimberley district in the north of Western Australia.

2. *Distribution throughout Australia.*—Until 1880, New South Wales was the principal cattle-raising State, but in that year Queensland occupied the leading position, which it has since maintained. There was a very rapid increase in the number of cattle in Australia up to the year 1894, when 12,311,617 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,062,742 in 1902. Following the disastrous drought which terminated in the latter year the herds were gradually built up, and, despite recurring droughts, they continued to increase until the maximum number of 14,441,309 cattle was attained in 1921. After that year the number dropped continuously till 1929, largely owing to the decline in the overseas demand for frozen beef. With the expansion of dairying it recovered to 14,048,671 in 1934, but from that year declined continuously to 1939 when it stood at 12,861,781. The upward movement which commenced in 1940 was continued until 1944, the total number of cattle (14,183,679) in the latter year being at its highest level since 1923. Drought conditions and other factors during 1944-45 and 1945-46 caused a decline in numbers to 14,133,167 in 1945, to 13,878,006 in 1946 and to 13,426,646 in 1947. There has, however, since been an upward movement in numbers to 13,784,584 in 1948 and 14,123,610 in 1949. A graph showing the number of cattle in Australia from 1860 appears on page 862.

The numbers of cattle (beef and dairy) in the several States and Territories in each year 1945 to 1949 compared with the average for the years 1935 to 1939 are shown below.

CATTLE : NUMBER.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aus. Cap. Terr.	Total.
Average, 1935 to 1939									
1939	3,198,201	1,951,962	6,018,494	330,581	819,026	262,088	889,345	8,771	13,478,468
1945	3,144,701	1,903,110	6,623,112	391,323	852,563	224,668	984,370	9,320	14,133,167
1946	3,116,834	1,827,087	6,542,210	374,096	833,567	216,306	960,039	7,867	13,878,006
1947	2,983,093	2,060,061	5,945,285	423,980	811,949	220,119	972,990	9,169	13,426,646
1948	3,129,740	2,174,203	5,975,460	445,287	815,610	244,707	991,429	8,748	13,764,584
1949	3,252,752	2,224,543	5,991,797	461,086	864,131	266,419	1,052,811	10,071	14,123,610

Although the proportion is not as high as it has been in the past, Queensland was carrying 42.42 per cent. of the cattle in Australia in 1949. The percentage in each State and Territory during that year was :—New South Wales, 23.03 ; Victoria, 15.75 ; Queensland, 42.42 ; South Australia, 3.27 ; Western Australia, 6.12 ; Tasmania, 1.89 ; Northern Territory, 7.45 ; Australian Capital Territory, 0.07.

Graphs indicating the distribution of beef and dairy cattle separately in Australia during 1947-48 are shown on pp. 895-6 of this issue. A graph showing the distribution in 1924-25 of the total cattle in Australia appeared on page 660 of Official Year Book No. 22 while in Official Year Book No. 34 similar graphs respecting the distribution of total cattle and of dairy cows may be found on pp. 453-4.

3. **Classification of Cattle According to Purpose.**—Of the total number of cattle in Australia in 1949, 9,260,972 or 65.6 per cent. were classified as beef cattle. The numbers classified as beef cattle in the several States and Territories during the years 1943 and 1945 to 1949 were as follows :—

BEEF CATTLE : NUMBER.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aus. Cap. Terr.	Total.
1943	1,676,174	577,362	4,892,691	170,657	604,543	101,735	978,434	5,428	9,007,024
1945	1,813,166	538,908	5,113,870	146,215	617,634	96,602	984,370	6,908	9,317,673
1946	1,839,630	527,318	5,099,509	142,795	604,056	90,139	960,039	5,243	9,268,729
1947	1,755,456	648,433	4,613,163	161,913	588,397	87,854	972,990	6,227	8,834,433
1948	1,889,979	697,824	4,592,896	170,156	590,130	100,066	991,429	5,917	9,038,403
1949	1,993,395	711,251	4,568,966	182,065	634,138	111,297	1,052,811	7,049	9,260,972

A classification of numbers on this basis is not available prior to 1943.

Particulars relating to dairy cattle numbers will be found in Chapter XXI. "Farm-yard, Dairy and Bee Products".

4. **Size Classifications of Cattle Herds.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1947-48 and published in *Production Bulletin* No. 42—Part II.—Primary Industries and Total Recorded Production. The tables relating to beef and dairy cattle show classifications according to size of herd and area of the holdings, together with data indicating the extent to which cattle were run in conjunction with pig-raising and wheat-growing.

5. **Comparison with other Countries.**—The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world for the years 1936-40 and at the latest available date. The figures, which have been compiled by the Food and Agriculture Organization of the United Nations, relate generally to areas embraced by post-war boundaries, but do not cover identical areas for the two periods in all cases.

CATTLE : NUMBER IN VARIOUS COUNTRIES.

('000.)

Country.	Average, 1936-40.(a)	Year and Month.	Number.
India	(b) 137,974	1945	136,369
United States of America	66,684	1947 (January) ..	81,207
Brazil	40,807	1946 (September) (c)	46,358
U.S.S.R. (Russia)	48,500	1946	(c) 41,500
Argentina	33,762	1947 (June) ..	41,268
Pakistan	(b) 24,444	(d)	(d)
China, Proper	(e) 23,081	1947 (May) ..	18,998
France	15,504	1946 (October) ..	15,100
Germany	19,881	1946 (December) (f)	13,982
Australia	13,285	1947 (March) ..	13,427
Colombia	8,010	1946 (December)	13,169
Union of South Africa	11,636	1946 (August) ..	12,593
Mexico	11,722	1944	(c) 12,000
Turkey	7,177	1946 (December)	9,764
United Kingdom	8,798	1946 (December)	9,238
Canada	8,246	1946 (December)	9,016
Italy	7,571	1947 (July) ..	7,263
Uruguay	8,297	1946 (May) ..	6,834
Tanganyika	(b) 5,209	1947	6,420
Madagascar	(b) 5,266	1946 (December)	5,940

(a) Average for two to four years in some cases. (b) 1939. (c) Unofficial estimate.
 (d) Not available. (e) 1937. (f) 1948 *de facto* boundaries.

6. Imports and Exports of Cattle.—The products of the cattle-raising industry figure largely in the export trade of Australia, although the export of live cattle has never been large. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for stud purposes. Details for the years 1943-44 to 1947-48 compared with the average for the years 1934-35 to 1938-39 are as follows :—

CATTLE : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
Average, 1934-35 to 1938-39	295	£A.f.o.b. 22,304	308	£A.f.o.b. 5,977	13	£A.f.o.b. -16,327
1943-44 ..	32	5,364	125	3,302	93	-2,002
1944-45 ..	59	16,971	1,232	24,138	1,173	7,167
1945-46 ..	56	32,919	340	10,110	284	-22,809
1946-47 ..	111	56,585	781	28,615	670	-27,970
1947-48 ..	103	29,934	4,359	74,141	4,256	44,207

NOTE.—The minus sign (—) signifies net imports.

The average value per head of the cattle imported during the last five years was £A.392 14s. 5d. while the average value per head of the cattle exported during the same period was £A.20 10s. 7d.

7. **Cattle Slaughtered.**—The numbers of cattle slaughtered during each of the years ended June, 1944 to 1948 compared with the average for the years 1934-35 to 1938-39 are shown in the following table :—

CATTLE (INCLUDING CALVES) SLAUGHTERED.

('000.)

Year ended June—	Slaughterings passed for Human Consumption.									Total Slaughterings including Boiled Down.
	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N. T.	A.C.T.	Total.	
Average, 1935 to 1939..	a 1,112	812	1,046	(b) 156	(b) 124	45	(b) 4	2	3,391	3,331
1944 ..	974	755	948	177	103	53	41	2	3,053	3,092
1945 ..	970	795	942	169	102	47	41	1	3,067	3,109
1946 ..	1,002	874	798	137	119	43	25	2	2,700	2,741
1947 ..	1,070	678	1,081	145	133	42	12	3	3,164	3,199
1948 ..	1,076	748	1,188	165	145	38	15	3	3,378	3,411

(a) Year ended March.

(b) Year ended previous December.

8. **Production of Beef and Veal.**—Details of the production of beef and veal in each State and Territory are given in the following table for the years indicated :—

PRODUCTION OF BEEF AND VEAL (BONE-IN WEIGHT) : AUSTRALIA.

('000 tons.)

Year ended June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	N. Terr.	A.C.T.	Total.
Average, 1935 to 1939	(a) 173	115	181	(b) 25	(b) 27	9	(b) 1	..	531
1944	145	100	187	26	20	11	10	1	500
1945	126	99	175	23	18	9	10	1	461
1946	134	76	137	21	24	8	6	1	407
1947	140	96	190	24	26	8	3	1	488
1948	162	105	226	27	30	8	3	1	562

(a) Year ended March.

(b) Year ended previous December.

9. **Consumption of Beef and Veal.**—For the three pre-war years 1936-37 to 1938-39 the average annual production of beef and veal in Australia was 569,000 tons of which 127,000 tons were exported, leaving a balance of 442,000 tons (or the carcass equivalent of 144 lb. per head per annum) available for consumption as fresh and canned meat.

In order to cope with the increasing demands by Australian and Allied Services based upon Australia and to supply as much beef as possible to meet the import requirements of the United Kingdom, it was necessary to introduce from January, 1944 a system of rationing limiting civilian consumption which has always been very high. As a result, the quantity of beef and veal entering civilian consumption per head decreased from the pre-war average of 144 lb. to 124 lb. in 1943, 92 lb. in 1944 and 87 lb. in 1945. Consumption subsequently increased to 93 lb. per head in 1946, 97 lb. in 1946-47 and 109 lb. in 1947-48. Meat rationing was discontinued from 21st June, 1948 and there was a further rise in consumption to about 120 lb. per head in 1948-49.

In the following table details of the production and disposal of beef and veal are given for the periods stated.

**PRODUCTION AND DISPOSAL OF BEEF AND VEAL (BONE-IN WEIGHT) :
AUSTRALIA.**

('000 tons.)

Year.	Changes in Stock.	Production.	Exports.	For Canning.	Consumption in Aus- tralia as Human Food.	
					Total.	Per Head per Annum.
Average, 1936-37 to 1938-39	..	569	127	(a)	442	lb. 144.1
1946-47 ..	.. + 8	488	91	65	324	96.5
1947-48 ..	.. ..	562	117	73	372	108.9
1948-49(b) ..	.. - 4	572	98	61	417	119.9

(a) Included with exports.

(b) Subject to revision.

10. **Exports of Frozen Beef and Veal.**—The export of frozen meat from Australia dates from about 1881, and since that year the trade has grown considerably. The quantity of frozen beef and veal exported in 1938-39 amounted to 271,963,829 lb., valued at £A.4,323,680, but there was a decline during the war years owing to reduced production and the diversion of supplies to meet the requirements of the Australian and Allied Services based on Australia. The quantity exported in 1947-48, although considerably above the war-time levels, was approximately 12.8 per cent. less than in 1938-39. The quantities and values of frozen beef and veal exported during the five pre-war years ended 1938-39 and in each year 1943-44 to 1947-48 are shown in the following table :—

EXPORTS OF FROZEN BEEF AND VEAL : AUSTRALIA.

Year.	Exports of Frozen and Chilled Beef.		Exports of Frozen Veal.	
	lb.	£A. f.o.b.	lb.	£A. f.o.b.
Average, 1934-35 to 1938-39	231,355,425	3,188,491	10,353,356	165,205
1943-44	46,266,506	1,212,311	1,180,490	34,004
1944-45	61,595,568	1,623,697	1,551,690	39,405
1945-46	106,059,782	2,711,077	4,731,548	122,906
1946-47	178,298,117	4,521,746	2,040,347	60,127
1947-48	234,592,893	6,110,568	2,557,206	82,047

Prior to the war the largest purchaser of Australian beef and veal was the United Kingdom, which during 1938-39 took £3,901,691, or about 90.2 per cent. of the total shipments. Other countries importing Australian beef were, in order of importance, Egypt, Malaya (British), Malta, Philippine Islands and Hong Kong; these countries, together with the United Kingdom, accounted for 98.0 per cent. of the total value of exports. However, at the request of the United Kingdom Government there was a considerable diversion from that country to nearer British possessions during the war years. In 1947-48 shipments to the United Kingdom were valued at £5,371,034 or 86.7 per cent. of the total value of beef and veal exports, while exports to other British countries amounted to £595,096, equivalent to 9.6 per cent. of the total.

In view of the preference overseas for chilled beef, the Australian beef industry was at a serious disadvantage until investigations proved that beef could be successfully transported from Australia to United Kingdom in a chilled condition. Trial shipments of 254,000 lb. in 1932-33 and 1,515,000 lb. in 1933-34 were made, and the exports in subsequent years increased as follows :—1934-35, 21,570,928 lb., £322,239; 1936-37,

41,869,695 lb., £608,175; and 1938-39, 58,963,009 lb., £988,148. However, the advent of war seriously affected the export trade in chilled beef, which decreased as follows:—1939-40, 12,786,859 lb., £206,353; 1940-41, nil; 1941-42, 1,697 lb., £70; 1942-43, 1,843 lb., £69; and 1943-44 to 1947-48, nil.

II. **Contract for Purchase of Exportable Surplus.** A long-term contract was negotiated between the Governments of the Commonwealth and the United Kingdom for the purchase of Australia's exportable surplus of beef and veal for 4 years ended 30th September, 1948. The contract was later extended for a further two years to 30th September, 1950. Fuller particulars will be found in § 1, par. 10 (iii) *ante*.

§ 4. Sheep.

1. **Initiation of the Pastoral Industry.**—Fortunately for Australia, the suitability of its climate and general conditions for the production of a high class of wool were, at an early date in the history of its settlement, surmised and tested by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. To the energy of this enterprising pastoralist is due in large measure the rapid and extremely satisfactory development of Australia as a producer of fine wool, and while it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. **Movement in Sheep Numbers: Australia.**—Fluctuations in the number of sheep recorded for each year in Australia from 1860 onwards may be seen from the graph on page 862. Up to 1945 there were five marked periods of decline, but the losses were made up rapidly. In each of the years 1925 to 1945 the sheep flocks exceeded 100 millions, reaching 125,189,129 in 1942, the greatest number recorded in Australia. At no previous period have such large numbers been depastured continuously, and the development has taken place despite an increase, over this period, in the annual slaughter for the meat trade from about 10 million to 25 million.

However, a sharp decline to 105 millions occurred in 1945 followed by a further reduction to 96.4 millions in 1946 and to 95.7 millions in 1947. This represented a loss from all causes other than slaughtering of about 27 million sheep (22 per cent.) since 1944 and was largely attributable to the severe drought conditions experienced during 1944, 1945 and 1946. The passing of the drought and consequent re-stocking resulted in a rise in sheep numbers to 102.6 millions in 1948 and to 108.7 millions in 1949.

The following table shows the approximate movement in sheep numbers in Australia in each season 1938-39 to 1948-49:—

SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA.
(‘000.)

Season.	Lambs marked.	Excess of Imports (+) or Exports (—)	Sheep and Lambs Slaughtered.	Estimated number of deaths from disease, drought, etc. (a)	Number at 31st March.	Annual Net Increase (+) or Decrease (—)
1938-39 ..	25,469	— 67	18,900	8,817	(b) 111,058	— 2,315
1939-40 ..	33,300	— 72	19,006	5,975	(b) 119,305	+ 8,247
1940-41 ..	32,238	— 86	21,822	6,941	(b) 122,694	+ 3,389
1941-42 ..	32,246	— 65	22,258	7,428	(b) 125,189	+ 2,495
1942-43 ..	32,268	— 5	25,573	7,264	124,615	— 574
1943-44 ..	33,366	— 7	26,585	8,215	123,174	— 1,441
1944-45 ..	25,635	— 3	25,632	17,803	105,371	— 17,803
1945-46 ..	20,683	— 22	17,682	11,954	96,396	— 8,975
1946-47 ..	25,186	— 80	18,362	7,417	95,723	— 673
1947-48 ..	30,149	— 79	17,059	6,175	102,559	+ 6,836
1948-49 (c) ..	30,646	— 84	17,477	6,909	108,735	+ 6,176

(a) Balance figure.

(b) As at commencement of last year shown.

(c) Subject to revision.

3. **Distribution throughout Australia.**—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, depasturing about one half of the sheep of Australia.

A graph indicating the distribution of sheep in Australia during 1947-48 is shown on page 897. Similar graphs for the years 1938-39 and 1924-25 were published in Official Year Books, No. 34, page 452 and No. 22, page 659, respectively.

The numbers of sheep in the several States and Territories for each year 1945 to 1949 compared with the average for the years 1935 to 1939 are shown in the following table:—

SHEEP : NUMBER.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
(a)	51,773,771	17,554,969	21,060,512	8,515,353	9,839,454	2,311,729	23,351	240,239	111,319,378
1945	46,662,000	16,457,101	21,202,120	8,473,939	10,049,587	2,156,071	29,269	250,778	105,370,865
1946	44,076,000	14,655,277	18,943,762	6,786,538	9,765,983	1,925,604	18,561	224,680	96,396,405
1947	44,105,000	16,598,490	16,084,340	7,958,619	9,787,002	1,933,332	28,005	227,994	95,722,782
1948	46,065,000	17,931,173	16,742,629	9,055,237	10,443,798	2,086,528	19,058	215,227	102,558,650
1949	50,404,000	19,170,312	16,498,957	9,365,713	10,872,540	2,160,009	25,791	238,110	108,735,432

(a) Average, 1935 to 1939.

Apart from the effect of drought the relative number of sheep depastured in the different States has remained fairly constant.

The percentage distribution in 1948 was:—New South Wales, 46.36; Victoria, 17.63; Queensland, 15.17; South Australia, 8.61; Western Australia, 10.00; Tasmania, 1.99; Northern Territory, 0.02; Australian Capital Territory, 0.22 per cent.

4. Classification of Sheep According to Age, Sex and Breed.—In the following table numbers of sheep in Australia are classified according to age and sex at 31st March of the years 1943 and 1946 to 1949. Data in this form are not available prior to 1943.

SHEEP : AGE AND SEX, AUSTRALIA.

Description.	31st March—				
	1943.	1946.	1947.	1948.	1949.
Rams, 1 year and over ..	1,651,231	1,300,842	1,331,614	1,383,644	1,442,896
Breeding ewes (including ewes intended for mating)	56,674,075	47,652,092	47,672,089	49,770,919	50,855,371
Other ewes, 1 year and over	9,636,124	6,382,593	5,615,600	5,432,501	6,795,058
Wethers, 1 year and over ..	31,985,775	25,002,494	22,486,789	22,931,972	26,109,630
Lambs and hoggets, under 1 year ..	24,667,467	16,058,384	18,616,690	23,039,614	23,441,877
Total, Sheep and lambs	124,614,672	96,396,405	95,722,782	102,558,650	108,735,432

Particulars relating to the principal breeds of sheep were collected uniformly for all States and the Australian Capital Territory at 31st March, 1947 and are shown in the following table. Later details are not available for all States:—

SHEEP : PRINCIPAL BREEDS, 31st MARCH, 1947.

Breed.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	A.C.T.	Australia.
Merino ..	31,067,510	5,265,808	15,872,429	5,926,462	8,323,849	280,313	27,637	196,802	66,960,810
Other pure breeds	2,139,893	1,407,349	23,795	342,187	488,975	456,411	41	8,119	4,866,770
Merino comebacks	2,059,812	3,001,730	89,132	274,068	(b)	282,300	155	5,114	(c) 5,712,311
Crossbreds ..	7,837,785	6,923,603	98,984	1,415,902	974,178	914,308	172	17,959	18,182,891
Total ..	43,105,000	16,598,490	16,084,340	7,958,619	9,787,002	1,933,332	28,005	227,994	95,722,782

(a) As at 31st December, 1946. Distribution between categories has been estimated separately. Included with crossbreds.

(c) Incomplete.

(b) Not Available.

5. **Size Classifications of Sheep Flocks.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1947-48 and published in *Production Bulletin* No. 42—Part II.—Primary Industries and Total Recorded Production. The tables relating to sheep farming show classifications according to size of flock and areas of the holdings together with data indicating the extent to which sheep are run in conjunction with wheat-growing.

6. **Comparison with other Countries.**—As regards the size of its flocks and the quantity and quality of wool produced, Australia has long occupied a leading position amongst the sheep-raising countries of the world.

As with a number of other important sheep-raising countries, it has, however, suffered a considerable reduction in sheep numbers since 1939, but still holds the leading position with 103 million sheep, followed by the U.S.S.R. (Russia) with about 65 million, Argentina with 51 million and India with 50 million. The highest percentage reductions in sheep numbers since immediately preceding the 1939-45 War have occurred in Rumania, 44.5 per cent.; Morocco (French), 41.2; United Kingdom, 32.3; United States of America, 31.2; France, 26.3; China, 26.1; Greece, 25.9; Union of South Africa, 21.3; and U.S.S.R. (Russia), 17.7.

The following table shows the number of sheep in Australia in relation to the numbers in some of the principal sheep-raising countries of the world for the last available pre-war year and at the latest date of enumeration. The figures have been compiled by the Commonwealth Economic Committee and the International Wool Textile Organization, who have estimated the world sheep numbers in 1947-48 at 684 million.

SHEEP : NUMBER IN VARIOUS COUNTRIES
(’000,000.)

Country.	Pre-war.		Post-war.	
	Year.	Number.	Year.	Number.
Australia	1938-39	111.1	1947-48	102.6
U.S.S.R. (Russia)	1938-39	(a) 80.0	1947-48	(a) 65.0
Argentina	1938-39	45.9	1947-48	50.9
India	1938-39	44.0	1946-47	50.0
United States of America	1938-39	51.3	1947-48	35.3
New Zealand	1938-39	31.9	1947-48	32.5
Union of South Africa	1938-39	39.0	1947-48	30.7
Turkey	1938-39	23.1	1947-48	24.0
Uruguay	1936-37	17.9	1946-47	19.6
Spain	(b)	(b)	1947-48	(c) 19.5
China	1939-40	26.0	1946-47	19.2
United Kingdom	1938-39	26.9	1947-48	18.2
Peru	(b)	(b)	1947-48	17.3
Brazil	1938-39	14.1	1946-47	15.5
Iran	1938-39	14.9	1947-48	13.0
Italy	1938-39	9.5	1947-48	9.5
Bulgaria	1938-39	8.7	1946-47	8.8
Iraq	1938-39	5.5	1947-48	8.0
France	1938-39	9.9	1947-48	7.3
Rumania	1938-39	12.8	1947-48	7.1
Morocco (French)	1938-39	10.2	1946-47	6.0
Greece	1938-39	8.1	1946-47	6.0
Chile	1935-36	5.7	1946-47	5.9
Mexico	1938-39	5.0	1947-48	5.2

(a) Estimated.

(b) No recent pre-war figures available.

(c) Unofficial figures.

7. **Overseas Imports and Exports of Sheep.**—As in the case of cattle, the overseas exports of live sheep from Australia are of comparatively little importance. During the last five years the principal consignments of ordinary sheep have been made to Malaya (British) from Western Australia. On 27th November, 1929, the export of stud sheep was prohibited, except with the approval of the Minister for Trade and Customs.

Stud sheep, however, were being exported in increasing numbers up to the outbreak of war in the Pacific, and shipments in 1939-40 amounted to 23,329 sheep valued at £79,955 compared with 346 valued at £7,315 in 1947-48. The chief countries to which stud sheep were consigned in 1939-40 were New Zealand, South Africa, Japan and Korea. The ordinary flock sheep exported from Australia were, for the most part, consigned to Malaya and the Pacific Islands. The following table shows the imports and exports of stud and flock sheep for the years 1943-44 to 1947-48 compared with the average for the years 1934-35 to 1938-39.

SHEEP : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
Average, 1934-35 to 1938-39	3,795	£A. f.o.b. 30,435	65,188	£A. f.o.b. 67,368	61,393	£A. f.o.b. 36,933
1943-44 ..	258	11,621	7,682	10,946	7,424	—675
1944-45 ..	616	17,912	2,938	7,145	2,322	—10,767
1945-46 ..	740	23,230	21,857	35,496	21,117	12,266
1946-47 ..	804	25,431	80,380	125,305	79,576	99,874
1947-48 ..	702	17,612	79,538	145,418	78,836	127,806

NOTE.—Minus sign (—) signifies net imports.

8. Sheep Slaughtered.—The following table shows the numbers of sheep slaughtered in the several States during each of the years ended June, 1944 to 1948 compared with the average for the years ended June, 1935 to 1939 :—

SHEEP (INCLUDING LAMBS) SLAUGHTERED. (‘000.)

Year ended June—	Slaughterings passed for Human Consumption.									Total Slaughterings including Boiled Down.
	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total.	
Average, 1935 to 1939 ..	a 6,474	7,797	1,101	b 1,703	b 1,178	358	(b) ..	25	18,636	18,693
1944 ..	9,610	9,205	2,212	2,814	1,950	615	2	48	26,456	26,632
1945 ..	8,942	9,091	1,899	3,038	1,603	509	2	54	25,138	25,294
1946 ..	7,206	5,057	1,465	1,438	1,369	432	2	45	17,014	17,086
1947 ..	6,904	6,305	1,167	1,625	1,416	393	2	49	17,861	17,894
1948 ..	5,743	6,242	1,036	1,755	1,442	376	3	46	16,643	16,672

(a) Year ended March.

(b) Year ended previous December.

9. Production of Mutton and Lamb.—Details of the production of mutton and lamb in each State and Territory are shown below :—

PRODUCTION OF MUTTON AND LAMB. (Tons.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Average, 1934-35 to 1938-39 ..	103,706	135,149	20,166	29,710	20,476	6,035	1	396	315,639
1943-44 ..	156,901	145,786	36,362	45,933	32,377	10,501	36	788	428,744
1944-45 ..	138,648	143,247	30,724	46,888	25,816	9,200	36	834	395,393
1945-46 ..	122,278	86,615	24,913	25,989	22,170	7,909	36	752	290,662
1946-47 ..	110,097	111,684	18,056	31,574	22,545	7,162	51	817	302,586
1947-48 ..	102,818	108,610	18,664	33,289	24,120	6,906	59	814	295,280

10. **Consumption of Mutton and Lamb.**—For the three pre-war years 1930-37 to 1938-39 the annual production of mutton and lamb averaged 320,000 tons of which 90,000 tons were exported leaving a balance of 230,000 tons (or the carcass equivalent of 74.9 lb. per head per annum) available for consumption.

During the war the demand for meat by Australian and Allied Services and the desire to maintain, as far as possible, exports to the United Kingdom necessitated the restriction of local consumption by the introduction, in January, 1944, of a system of rationing.

As the service and export demand was principally for beef this class of meat was in shorter supply to civilians than was mutton or lamb. As a result, the coupon rating for beef fixed under the civilian ration scale was more restrictive, and had the effect of increasing the quantity of mutton and lamb entering civilian consumption to a level approximating that of beef. In 1946-47, however, mutton and lamb consumption declined to below the pre-war level as a result of heavy shipments overseas and decreased slaughterings. Consumption per head has since risen slightly from 67.8 lb. in 1946-47 to 69.8 lb. in 1947-48 and to 70.4 lb. in 1948-49.

In the following table details of the production and disposal of mutton and lamb are given for the periods stated:—

**PRODUCTION AND DISPOSAL OF MUTTON AND LAMB (BONE-IN WEIGHT):
AUSTRALIA.
(’000 tons.)**

Year.	Changes in Stock.	Pro- duction.	Exports.	For Canning and Dehydra- tion.	Consumption in Aus- tralia as Human Food.	
					Total.	Per Head per annum.
Average, 1936-37 to 1938-39 .. ..	..	320	90	..	230	lb. 74.9
1946-47	— 9	303	73	11	228	67.8
1947-48 (b) ..	— 5	295	55	7	238	69.8
1948-49 (b) ..	+ 8	311	51	7	245	70.4

(a) Included with exports.

(b) Subject to revision.

11. **Exports of Frozen Mutton and Lamb.**—The export trade in mutton and lamb preserved by cold process expanded rapidly to 1913 when 205 million lb. were shipped. Progress was interrupted during the 1914-18 War and, owing probably to high wool prices, the exports of mutton and lamb for a number of years after were considerably less than earlier shipments. Exports commenced to rise again in 1929-30 and from that year onwards they continued to expand almost uninterruptedly until 1942-43 in which year 203,681,520 lb. of mutton and lamb, valued at £5,495,886, were exported. In earlier years shipments consisted mainly of frozen mutton but in 1923-24 lamb supplanted mutton and the exports of lamb were largely responsible for the increase in total shipments during the ten years to 1942-43. Due to reduced production as a result of drought conditions and the diversion of supplies to meet the requirements of the Australian and Allied Services based in Australia, there was subsequently a marked decline in mutton and lamb exports, which fell to 56,574,651 lb., valued at £1,540,419, in 1945-46. Exports rose steeply to 164,302,923 lb. (£4,543,764) in 1946-47, but fell again in 1947-48 to 122,482,889 lb. (£4,248,695).

The quantities and value of exports of frozen mutton and lamb in each year 1943-44 to 1947-48 compared with the average for the five years ended 1938-39 are given in the following table:—

EXPORTS OF FROZEN MUTTON AND LAMB : AUSTRALIA.

Year.	Exports of Frozen Mutton.		Exports of Frozen Lamb.		Exports of Frozen Mutton and Lamb.	
	lb.	£A. f.o.b.	lb.	£A. f.o.b.	lb.	£A. f.o.b.
Average, 1934-35 to 1938-39 ..	40,583,651	656,194	153,606,462	4,208,318	194,190,113	4,864,512
1943-44 ..	30,010,466	501,668	141,559,299	4,141,935	171,569,765	4,643,603
1944-45 ..	38,021,898	725,214	108,772,494	3,217,869	146,794,392	3,943,083
1945-46 ..	17,527,848	362,057	39,046,803	1,178,362	56,574,651	1,540,419
1946-47 ..	52,208,402	912,292	112,094,521	3,631,472	164,302,923	4,543,764
1947-48 ..	19,394,136	447,278	103,088,753	3,801,417	122,482,889	4,248,695

As with beef, the principal customer in this trade is normally the United Kingdom, which absorbed 91 per cent. of the total quantity exported from Australia during 1943-44. In 1947-48 exports of mutton and lamb to the United Kingdom amounted to 71.2 per cent. and 97.6 per cent. respectively of the total quantities exported.

12. **Contract for Purchase of Exportable Surplus.**—A long term contract covering the four years ended 30th September, 1948 was completed between the Governments of the Commonwealth and the United Kingdom for the purchase of Australia's surplus mutton and lamb. The contract was later extended for a further two years to 30th September, 1950. Particulars will be found in § 1, par. 10 (iii) *ante*.

§ 5. Wool.

1. **General.**—Australia is the leading wool-growing country in the world. With less than one-sixth of the world's sheep Australia produces one-quarter of the world's wool and of the total fine-quality merino wool, Australia produces about one-half. The bulk of the production is exported, but with the greater activity of Australian woollen mills the quantity used locally is increasing: the amount so used represented more than 10 per cent. of the total production in 1947-48 compared with 7 per cent. in 1938-39.

The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the following table. Further particulars of wool production in principal countries and of world production of wool by type are included in paragraph 6, "World Wool Production".

SHEEP AND WOOL : PRINCIPAL PRODUCING COUNTRIES, 1947-48.

Country.					No. of Sheep ('000,000).	Wool Production ('000,000 lb. in terms of greasy).
Australia .. .. .	..	..	..	..	102.6	973
Argentina .. .. .	..	..	..	..	50.9	495
New Zealand .. .. .	..	..	..	..	32.5	357
United States of America .. .. .	..	..	..	..	35.3	328
U.S.S.R. (Russia) .. .. .	..	..	..	..	(a) 65.0	240
Union of South Africa .. .. .	..	..	..	..	30.7	189

(a) Estimated.

Source : Commonwealth Economic Committee and International Wool Textile Organization.

2. **Greasy and Scoured Wool.**—Whether the weight of the wool clip should be stated as “in the grease” or as “scoured and washed” is a matter which seriously affects comparisons between the clips of different seasons and of different countries. The quantity of grease and other extraneous matter in a fleece differs, not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep. There is, moreover, no clearly defined standard in regard to the clean content of wool described as scoured and washed.

A committee of experts in a report to the Central Wool Committee estimated in 1940 that the clean scoured wool content of the total production of Australia averaged between 51 and 53 per cent. of its greasy weight.

Wool scoured in Australia by wool-scouring works, however, yields only about 46 per cent. because the grade of greasy wool treated locally for export as scoured includes a large proportion of dirty and low-grade wool.

The quantity of scoured and washed Australian wool exported during the five years ended 1947-48 was approximately 23.6 per cent. of the total wool exports regarded as “greasy”.

3. **Production.**—The bulk of the Australian wool production is shorn from live sheep; approximately 6 per cent. is obtained by fellmongering and about 5 per cent. is on skins exported. Statistics of wool production are compiled from data received from growers, fellmongers, etc. The following table shows the production for the five years 1943-44 to 1947-48 compared with average production for the five years ended 1938-39. Particulars of the gross value of wool produced in Australia are also shown; for the pre-war years and for 1946-47 and 1947-48 these values are based upon the average price of greasy wool realized at auction in the principal markets of Australia, while for 1943-44 to 1945-46 they are based upon the average appraised value plus certain adjustments as computed by the State Statisticians.

GREASY WOOL : TOTAL PRODUCTION.

State.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
New South Wales	480,070	517,410	448,083	431,54	432,021	422,200
Victoria	165,580	190,415	177,143	152,398	197,076	191,004
Queensland	164,971	194,355	178,719	173,240	144,820	143,290
South Australia	85,120	115,464	106,708	73,604	93,020	103,676
Western Australia (a) ..	81,543	105,226	86,841	86,980	90,255	95,410
Tasmania	15,504	17,925	16,324	16,338	16,643	15,326
Northern Territory (b) ..	35	308	308	155	305	305
Australian Capital Territory	1,827	1,913	1,763	1,960	2,038	1,767
Total—Quantity	995,256	1,169,016	1,016,480	936,230	976,778	973,938
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Value (c)	51,182	75,124	64,894	58,597	96,858	156,998

(a) For year ended previous December.

(b) Estimated.

(c) Subject to revision.

Production for 1948-49 has been estimated at 1,030 million lb., valued at £202,000,000.

4. **Care Needed in Comparing Clips.**—In comparing successive clips allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed in some areas that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

5. **Average Weights of Fleeces Shorn.**—The average weights of sheep and lamb fleeces shorn in each of the States of Australia and the Australian Capital Territory are shown in the following table for the five seasons 1934-35 to 1938-39 and each season 1943-44 to 1947-48 :—

AVERAGE WEIGHT OF SHEEP AND LAMB FLEECES SHORN.
(lb.)

State.	Average, 1934-35 to 1938-39. (a)	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
SHEEP.						
New South Wales ..	8.87	9.68	8.35	9.24	9.97	9.88
Victoria	7.84	8.29	7.74	7.50	9.97	9.33
Queensland	7.98	8.21	8.34	8.62	8.20	8.80
South Australia ..	10.06	10.17	9.66	9.10	11.51	11.26
Western Australia ..	8.53	9.64	8.22	8.53	8.70	9.43
Tasmania	7.62	7.41	7.11	6.75	7.73	8.30
Australian Capital Territory	8.32	7.40	7.10	8.56	9.37	8.74
Australia (b) ..	8.57	9.15	8.32	8.72	9.56	9.63
LAMB.						
New South Wales ..	2.75	2.99	2.79	2.89	3.03	3.10
Victoria	2.14	2.38	2.28	2.19	2.64	2.71
Queensland	2.89	2.90	3.45	3.44	3.23	3.55
South Australia ..	2.57	3.02	2.77	2.56	3.03	3.60
Western Australia ..	2.57	3.00	2.75	2.53	2.55	2.70
Tasmania	1.37	1.60	1.61	1.47	1.78	1.98
Australian Capital Territory	1.11	1.51	1.31	1.28	1.49	1.26
Australia (b) ..	2.57	2.88	2.71	2.73	2.87	3.04

(a) Mean of average weights in each season.

(b) Excludes Northern Territory.

6. **World Wool Production.**—The following table shows particulars of total production of wool in terms of greasy in the principal wool-producing countries of the world, together with estimates of world production of merino, crossbred and carpet type wool for the years 1938-39 and 1943-44 to 1947-48. The data for countries other than Australia were published by the Commonwealth Economic Committee in July, 1949, and were compiled from a questionnaire prepared by the Committee and the International Wool Textile Organization.

In 1947-48 Australia produced 26 per cent. of the world total of all types of wool, the share of the British Commonwealth exceeding 43 per cent. The principal wool producers other than Australia are Argentina with 13 per cent. of the world total, New Zealand, 10 per cent., United States of America, 9 per cent., U.S.S.R. (Russia), 7 per cent., and Union of South Africa, 5 per cent. World production of wool (all types) in 1947-48 was about 261 million lb. (6.6 per cent.) less than in 1938-39. This was due largely to the decline in the United States of America, amounting to 118 million lb. (26.5 per cent.), in the Union of South Africa, 75 million lb. (28.4 per cent), and in U.S.S.R. (Russia), 63 million lb. (20.8 per cent). In addition, production in the United Kingdom and a number of other European countries was lower, the net decline for Europe (excluding U.S.S.R.) as a whole being 125 million lb., or 24.0 per cent. Wool production in Argentina increased by 111 million lb., or 28.9 per cent.

Australia's wool clip is predominantly merino; New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. (Russia) is largely of the carpet type. While world production of merino wool has declined by about 17.6 per cent. since 1938-39, the production of crossbred types has risen slightly, by about 2.7 per cent. Carpet wool production has fallen by about 6.7 per cent.

WORLD PRODUCTION OF WOOL.

('000,000 lb.—in terms of greasy.)

Continent, Country and Type.			1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Oceania—								
Australia			984	1,169	1,017	936	977	973
New Zealand			327	330	372	365	360	357
Total			1,311	1,499	1,389	1,301	1,337	1,330
South and Central America—								
Argentina			384	518	498	467	493	495
Brazil			41	42	43	43	39	39
Chile			33	35	34	35	33	32
Peru			19	19	20	20	20	20
Uruguay			125	145	155	175	175	160
Other Countries			28	30	28	29	29	20
Total			630	789	778	769	789	775
North America—								
United States of America ..			446	466	436	402	362	328
Other Countries			16	18	20	20	17	15
Total			462	484	456	422	379	343
Europe (a)—								
Bulgaria			21	20	17	19	22	26
France			48	30	30	30	31	33
Italy			33	30	26	27	28	31
Rumania			49	29	22	22	26	20
Spain	(b)	60	84	88	82	77	77	75
United Kingdom			116	90	87	85	87	72
Yugoslavia		(b)	36	33	(b)	32	(b)	30
Other Countries			158	125	129	104	102	103
Total			521	441	431	400	403	396
U.S.S.R. (Russia)			303	231	210	220	227	240
Asia (a)—								
China and Dependencies ..		(b)	90	75	(b)	75	(b)	75
India and Pakistan	(b)	80	(b)	80	(b)	80	(b)	80
Iran			40	26	29	30	(b)	30
Iraq			18	21	22	24	25	(b)
Turkey (Europe and Asia)			69	62	67	70	69	71
Other Countries			60	57	55	58	58	60
Total			357	321	328	337	337	341
Africa—								
Union of South Africa ..			264	220	200	197	193	180
Other Countries			91	100	87	76	72	64
Total			355	320	287	273	265	253
World Total			3,939	4,085	3,879	3,722	3,737	3,678
Apparel type—								
Merino			1,424	1,509	1,334	1,242	1,172	1,173
Crossbred			1,691	1,784	1,779	1,722	1,801	1,736
Carpet type			824	792	766	758	764	769

(a) Excludes U.S.S.R. (Russia).

(b) Unofficial and provisional estimates.

7. **War-time Contracts.**—(i) *Wool.* Details of the contract entered into between the Governments of Australia and the United Kingdom for the purchase of the surplus wool clip of Australia for the duration of the war and one full clip thereafter (1939-40 to 1945-46) will be found in Official Year Book No. 36, page 1106.

(ii) *Sheepskins.* Details of the war-time contract arrangements for the period April, 1940 to June, 1946 between the Australian and United Kingdom Governments for the purchase of Australia's exportable surplus of woolled sheepskins will be found in Official Year Book No. 37, page 875.

8. **Australian Wool Realization Commission.**—(i) *General.* The accumulation of Dominion wool in the hands of the United Kingdom Government as an outcome of the war-time arrangements and the disposal of these stocks concurrently with future clips were matters for discussion by a conference of officials and experts from the United Kingdom, the Commonwealth of Australia, the Dominion of New Zealand, and the Union of South Africa, held in London in April-May, 1945. At this conference it was decided that the only sound method of handling the gigantic task of disposing of these stocks was by means of a partnership between the countries concerned, under which the old wool would be marketed and the marketing of the current clip supported throughout the period of disposal of stocks. To ensure that stability of wool prices would be achieved, a reserve price appropriate to type and governed by the general trend of prices, and at which the wool would be bought in if commercial bidding did not attain the appropriate level, was agreed upon.

(ii) *United Kingdom-Dominion Wool Disposals Limited.* The formation, by the four Governments, of a Joint Organization under the title of "United Kingdom-Dominion Wool Disposals Limited" (commonly referred to as "J.O.") was, therefore, undertaken for the purposes of buying, holding and selling wool on behalf of the United Kingdom and the Dominion Governments concerned. The Australian Wool Realization Commission (*see par. (v) following*) is the Australian subsidiary of this organization.

(iii) *Stocks.* (a) *Total held by Joint Organization.* The stock of Dominion-grown wool in the ownership of the United Kingdom Government at 31st July, 1945 was transferred to the joint ownership of the United Kingdom Government and the Dominion Government concerned, and all wool subsequently acquired under the scheme was in the joint ownership of the United Kingdom and the Dominion concerned. Total stocks of United Kingdom wool transferred to the Joint Organization at 31st July, 1945 were:—

	Bales.			
Australian-grown wool	6,796,000
New Zealand-grown wool	1,777,000
South African-grown wool	1,834,000
				<hr/>
				10,407,000
				<hr/>

By 30th June, 1949 these stocks had been reduced to 1,700,486 bales, whose origins, locations and types are shown in the following table :—

WOOL STOCKS HELD BY JOINT ORGANIZATION, 30th JUNE, 1949.
(Bales.)

Origin and Location of Stocks.				Type of Wool.			Total.
				Greasy.	Scoured.	Carbonized.	
Australian-grown wool—							
Held in Australia	..	..	..	754,251	190,473	..	944,724
„ United Kingdom	..	..	..	215,553	87,267	6,746	309,566
Total				969,804	277,740	6,746	1,254,290
New Zealand-grown wool—							
Held in New Zealand	..	..	..	186,957	15	(a) 25,788	212,760
„ United Kingdom	..	..	..	142,949	11,244	(a) 43,930	198,123
Total				329,906	11,259	69,718	410,883
				Merino.	Native, etc.	Karakul.	
South African-grown wool—							
Held in South Africa	..	..	..	32	3,511	17,757	21,300
„ United Kingdom	..	..	..	10,328	166	3,519	14,013
Total				10,360	3,677	21,276	35,313

(a) Slipe.

(b) *Total held in Australia.* In the next table details are shown of the stocks of wool held in Australia by the Central Wool Committee and its successor, the Australian Wool Realization Commission, on the dates specified. The quantities, which distinguish between greasy, scoured and carbonized, refer to the amount of appraised wool actually held in store in Australia. Wool held by brokers prior to appraisalment and any held by woollen mills or growers is not included.

STOCKS OF APPRAISED WOOL HELD IN STORE IN AUSTRALIA.

(Source : Australian Wool Realization Commission.)

('000 lb.)

31st July—				Greasy.	Scoured.	Carbonized.
1940 .. ..	..	..	..	127,134	13,640	2,017
1941 .. ..	..	..	..	370,444	82,329	8,781
1942 .. ..	..	..	..	397,051	75,896	6,296
1943 .. ..	..	..	..	758,288	125,555	12,271
1944 .. ..	..	..	..	1,141,777	155,534	13,512
1945 .. ..	..	..	..	1,321,387	176,295	13,325
1946 .. ..	..	..	..	1,072,771	164,021	8,712
1947 (a) .. ..	..	..	..	675,110	104,710	3,199
1948 (a) .. ..	..	..	..	517,303	73,236	239
1949 (a) .. ..	..	..	..	253,061	42,591	12

(a) 30th June.

(iv) *The Financial Plan.* Representatives of the four Governments meet prior to the opening of each wool year and at such other times as may be required, to agree upon the general level of reserve prices in the light of the advice of the Joint Organization.

Under the financial plan, the United Kingdom and the Dominion concerned each take up 50 per cent. of the original capital represented by the opening stock of wool grown in that Dominion to be handed over to the Joint Organization, that opening stock being taken in by the Joint Organization at its original cost, including f.o.b. payments less the amounts accumulated in the divisible profits accounts, which amounts, except in the case of South Africa, are estimated fully to cover depreciation of that stock. The balances in the divisible profits accounts are thus used to write down the opening stocks taken in by the Joint Organization. Payment of the Dominions' share of the original capital is to be made in four annual instalments. Towards these instalments are applied the Dominions' shares of the proceeds of sales by the Joint Organization and of the net profit during the interim period 1945-46. Each Dominion and the United Kingdom share equally in the provision of any further capital required by the Joint Organization during the operation of the scheme for payment for bought-in new wool of that Dominion.

Operating expenses are borne equally between the industry and the Joint Organization, the share of the industry being paid by the Dominion Governments primarily from the proceeds of a contributory charge on all sales of new clip wool. The share of the Joint Organization is met by deduction from the proceeds of sales by the Joint Organization before application to capital repayment.

The ultimate balance of profit or loss arising from the transactions of the Joint Organization in the wool of any Dominion will be shared equally between the United Kingdom and the Government of that Dominion.

An interim distribution which totalled £24,300,000 was made at the end of 1949 to Australian wool-growers from profits arising from the Wool Disposals Plan.

(v) *The Australian Subsidiary.* Pursuant to the provisions of the Wool Realization Act (No. 49 of 1945) the Australian subsidiary, known as the Australian Wool Realization Commission, was established and commenced operations on 15th November, 1945, the Central Wool Committee having administered the acquisition of the 1945-46 clip to that date. This Commission comprises a Chairman and an Executive Member (the two administrators of the Plan), four growers (two representatives of the Australian Wool-growers' Council and two representatives of the Wool Producers' Federation), one representative of the Federated Storemen and Packers' Union and two other persons chosen for their knowledge of the marketing of wool.

The Act also gives power to the Commission to appoint whatever advisory or technical committees it considers necessary, thus providing a formal basis for full co-operation between the Commission and the various facets of the trade. Accordingly the Commission early in 1946 appointed the following Committees :—

- Wool Selling Brokers' Advisory Committee ;
- Wool Buyers' Advisory Committee ;
- Woolen and Worsted Manufacturers' Advisory Committee.

(vi) *The Contributory Charge.* Associated legislation, viz., the Wool (Contributory Charge) Act 1945 and the Wool (Contributory Charge) Assessment Act 1945 provide for a contributory charge to be imposed on all wool—

(a) produced in Australia ; and

(b) on or after a date to be fixed by proclamation—

- (i) sold by a broker at auction or otherwise ;
- (ii) purchased by a manufacturer ;
- (iii) subjected by a manufacturer (whether or not he is the producer or owner of the wool) to a process of manufacture ; or
- (iv) exported from Australia ;

the rate of the charge to be such percentage as is prescribed from time to time of the sale value of the wool, the percentage being such as is necessary to provide the amounts required to meet the share of the industry in the operating expenses of the Joint Organization, the payment of interest on monies expended by the Commonwealth in purchases of wool in pursuance of the Disposals Plan and unrecouped, and payment into the Wool Use Promotion Fund as provided under the Wool Use Promotion Act 1945. The plan did not require that the Contributory Charge should operate during the 1945-46 season. For further particulars of the Wool Contributory Charge and the amounts collected see Chapter XVII.—Public Finance, pages 769-70.

(vii) *Conclusion.* To sum up, the plan, with its associated legislation, amounts to the underwriting of the income of Dominion wool producers during the life of the disposal plan, protecting the growers against the serious fall in prices which would undoubtedly occur if the accumulated stocks were unloaded without control on the market, and it will prevent also undue price fluctuations during individual years and between one year and the next. In other words, it endeavours to guarantee the stability and solvency of the whole wool industry.

(viii) *Review of the Operations during 1945-46 Season.* The disposals plan provided that, for the wool year 1945-46, the method of purchase which had operated during the previous six years, namely appraisement and acquisition, should be continued and that the United Kingdom Government would be responsible for financing the purchase of all the wool so acquired, the management and sale of the 1945-46 clip being entrusted to the Joint Organization. Until 16th November, 1945, the Central Wool Committee conducted appraisements as in previous seasons, and then, with the same organization, the Australian Wool Realization Commission completed the appraisements for the remainder of the season. The total weight and value of wool appraised for the 1945-46 season are shown in the following table in comparison with similar figures for the previous six years.

WOOL APPRAISEMENTS : AUSTRALIA.

Year ended June—	Quantity of Wool Appraised.			Value of Wool.		Average Value per lb. Greasy.	
	Greasy.	Scoured.	Total.	Total Appraised.	Total Return to Grower.	Appraised.	Total Return to Grower.(a)
	'000 lb.	'000 lb.	'000 lb.	£	£	d.	d.
1940(b)	1,066,237	45,829	1,112,066	59,841,898	64,722,636	12.405	13.438
1941	990,833	53,206	1,044,039	55,251,133	60,959,828	12.085	13.438
1942	1,034,617	55,853	1,090,470	57,958,392	63,126,096	12.259	13.438
1943	1,048,049	51,309	1,099,418	66,651,256	73,525,280	13.898	15.453
1944	1,044,228	54,021	1,098,249	66,850,270	73,701,759	13.925	15.453
1945	883,767	47,315	931,082	56,075,091	62,520,983	13.755	15.453
1946	823,335	43,612	866,947	51,479,647	58,183,617	13.569	15.453

(a) Overall flat rate price paid by the United Kingdom Government. 1939-June, 1940.

(b) Period September,

As was recommended by the London Wool Conference 1945, the purchase price paid by the United Kingdom Government for the Australian clip (15.4531d. per lb. Australian currency) for the 1944-45 season was maintained for the 1945-46 season. It was agreed in communications with the United Kingdom and Commonwealth Governments that the selling prices for all sales of wool as from the 1st November, 1945, would be the United Kingdom Export Issue prices which were in force at that date.

With the accumulated stocks in Australia taken over at 31st July, 1945 by the Joint Organization and the 1945-46 clip of 2,865,717 bales, a total of 7,829,485 bales were available in Australia for supply to consumers during the 1945-46 season. In accordance with the announcement made by the Joint Organization on 24th June,

1946, that the sale of wool at fixed prices by or on behalf of the Joint Organization would cease on 30th June, 1946, no sales were booked in Australia after 30th June, 1946. However, the volume of sales rapidly accelerated towards the end of the year and during June, 1946, sales from wool within Australia totalled approximately 1,300,000 bales. The accounting period, however, for the 1945-46 season was from 1st August, 1945 to 31st July, 1946, and during this period estimated total sales amounted to 4,892,049 bales including 1,209,937 bales unshipped at 31st July, 1946.

(ix) *Wool classified according to Quality.* It has not been possible to undertake any analysis of the wool produced in Australia because the data necessary to make such a tabulation effective were lacking. Under war-time control, however, records were kept which made it possible to classify each lot appraised according to quality, degree of fault and combing or carding type for each of the years 1940-41 to 1945-46.

Since the resumption of auctions in 1946-47 this analysis has been continued by the Australian Wool Realization Commission, but the basis of the data has been changed to the catalogues of auction sales, excluding wool to which Joint Organization's reserves were not applicable, and not upon appraisement as previously. The following table provides a detailed analysis of wool appraised or sold at auction according to quality, for the years 1945-46 to 1948-49 compared with 1940-41, according to the records compiled by the Australian Wool Realization Commission. "Quality" ("64's, 60's, 58's", etc.) is a measure of the fineness and texture of wool for spinning purposes. Broadly, it means the maximum number of hanks of yarn, each of 560 yards length, which can be spun from 1 lb. of combed wool. For instance, wool of 64's quality is of a fineness and texture which will produce 64 hanks, each of 560 yards, from 1 lb. of tops (combed wool) of that particular wool.

CLASSIFICATION OF GREASY WOOL APPRAISED OR SOLD AT AUCTION: AUSTRALIA.

(Bales of approximately 300 lb.).

Pre-dominating Quality.	1940-41.(a)		1945-46.(a)		1946-47.(b)		1947-48.(b)		1948-49.(b)	
	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.
70's and finer	200,951	6.2	89,958	3.4	117,064	4.3	106,061	3.7	143,742	4.7
64/70's ..	679,377	20.8	350,738	13.2	396,184	14.7	396,968	13.9	498,285	16.4
64's ..	869,117	26.7	466,876	17.6	424,609	15.7	470,819	16.5	558,785	18.4
64/60's ..	236,138	7.2	287,704	10.9	199,190	7.4	254,726	8.9	265,159	8.7
60/64's ..	408,534	12.5	414,821	15.6	333,653	12.4	435,228	15.2	422,161	13.9
60's and 60/58's ..	387,164	11.9	436,275	16.4	367,578	13.6	397,994	13.9	353,373	11.6
Total 60's and finer	2,781,281	85.3	2,046,372	77.1	1,838,278	68.1	2,061,796	72.1	2,241,505	73.7
58's ..	270,371	8.3	270,398	10.2	315,957	11.7	324,153	11.3	340,606	11.2
56's ..	135,232	4.2	204,879	7.7	283,685	10.5	278,930	9.7	288,717	9.5
50's ..	39,619	1.2	65,099	2.5	166,383	6.2	132,247	4.6	115,075	3.8
Below 50's	21,089	0.6	22,053	0.8	64,200	2.4	45,289	1.6	37,583	1.3
Oddments ..	12,955	0.4	46,300	1.7	29,223	1.1	20,118	0.7	17,577	0.5
Grand total	3,260,547	100.00	2,655,707	100.00	2,697,732	100.00	2,862,533	100.00	3,041,063	100.00

(a) Appraised greasy wool. (b) Greasy wool sold at auction, excluding that to which Joint Organization's reserves were not applicable.

9. *Wool Publicity and Research.*—Under the Wool Use Promotion Act of 1945, provision was made for improving the production and increasing the use of wool by the appointment of a Commonwealth Wool Adviser, the re-constitution of the Australian Wool Board, and the establishment of a Wool Consultative Council to advise the Ministers in regard to the aspects of Australian wool industry with which they are

associated. The Australian Wool Board consists of three representatives of the Australian Wool Growers' Council and three from the Australian Wool Producers' Federation. The Wool Consultative Council consists of the Wool Adviser and seven members appointed by the Minister to represent the various branches of the industry.

Funds are provided by the Wool Tax Equivalent from the Wool (Contributory Charge) Act supplemented by an equivalent contribution from Treasury funds—in all about £600,000 per annum. Of this sum an amount will be paid to the Wool Research Trust Account for scientific, economic and cost research while the balance is to be applied by the Wool Board for promotion and publicity.

The Commonwealth Scientific and Industrial Research Organization is responsible for scientific, biological and technical research while the economic aspects of the industry are the responsibility of the Commonwealth Department of Commerce and Agriculture. Provision is made for co-operation with State Departments of Agriculture and other organizations.

10. Consumption of Locally Processed Wool.—Particulars of the total consumption of wool in Australia are not available as quantities of manufactured woollen goods are imported whose contents in terms of wool cannot be ascertained. It is possible, however, to secure with reasonable accuracy the quantities of wool used in Australian factories and mills to produce woollen cloth and other woollen goods, such as blankets, rugs and knitted wear. Some difficulties arise in the aggregation of returns from individual mills concerned with only one process in manufacture and whose output constitutes the raw material of other mills, but the risk of duplication has been reduced to a minimum. Reference is made to the woollen mills established in Australia in Chapter XXIV. "Manufacturing Industry".

The factors used to convert scoured wool and woollen yarn processed in Australia into their greasy equivalent are now computed from the data furnished by woollen mills. In 1947-48 these factors were:—1 lb. of worsted yarn was taken to equal 2.16 lb. of greasy while the greasy equivalent of 1 lb. of scoured wool was 1.72 lb.

In the following table particulars are given of the quantity of wool processed in Australian woollen mills, cotton mills, hosiery mills and other factories during the years 1938-39 and 1943-44 to 1947-48:—

CONSUMPTION OF LOCALLY PROCESSED WOOL IN AUSTRALIA.

(lb.—in terms of greasy.)

Year.	Woollen Mills.	Cotton Mills.	Hosiery Mills.	Other Factories.	Total.
1938-39	52,375,530	533,335	13,327,245	2,208,201	68,444,311
1943-44	81,398,278	1,199,683	22,421,814	9,786,325	114,806,100
1944-45	70,120,466	1,137,644	20,947,593	9,652,693	101,858,396
1945-46	62,126,366	355,180	15,012,495	9,416,989	86,911,030
1946-47	60,671,881	343,505	17,301,041	10,344,845	88,661,872
1947-48	66,118,340	647,666	18,671,501	14,025,055	99,462,562

11. Exports of Wool.—(i) *Greasy—Quantities.* Prior to the 1939-45 War, greasy wool exported overseas was sent principally to the United Kingdom and other European countries. In 1938-39, 41.9 per cent. of total shipments were sent to the United Kingdom, other important consignees being France, 20.4 per cent., Belgium, 13.1 per cent., and Japan, 9.1 per cent. During the war, exports to the United Kingdom declined and shipments to the European continent and to Japan virtually ceased, while the quantity shipped to the United States of America showed great expansion. Of the total quantity of greasy wool exported overseas during the five years ended 1945-46, 55.0 per cent. was sent to the United States of America and 36.2 per cent. to the United Kingdom. Shipments to European continental countries were resumed on a restricted

scale in 1945-46. With the return to auction sales in 1946-47, shipments of greasy wool to the European continent (mainly Belgium, France and Italy) reached record levels, while the quantity exported to the United States of America was the greatest since 1942-43. As a result, total exports during the year at 1,019.5 million lb. exceeded the average quantity exported during the five years ended 1938-39 by 256.6 million lb. or 33.6 per cent. In 1947-48 shipments to the United Kingdom showed a substantial rise, but the quantity consigned to the United States of America was only 39.3 per cent. of that shipped in the previous year, total exports of greasy wool being 245.2 million lb. or 24.0 per cent. less than in 1946-47. Of the total shipments in 1947-48, 35.8 per cent. went to the United Kingdom, 20.1 per cent. to France, 15.4 per cent. to the United States of America and 13.7 per cent. to Belgium. The following table shows the quantities of greasy wool exported, and the principal countries of recorded destination.

EXPORTS OF GREASY WOOL : AUSTRALIA.

(lb.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
United Kingdom ..	288,436,080	195,986,984	252,090,362	237,312,014	182,492,869	277,401,222
Other British Countries ..	2,158,300	12,381,738	6,891,668	7,804,205	8,878,978	8,274,392
Belgium ..	107,928,120	..	..	68,691,768	169,301,444	106,419,341
France ..	100,476,200	..	..	89,579,783	186,386,964	155,548,112
Germany ..	36,954,360	..	..	..	747,557	18,768,718
Italy ..	21,747,460	..	..	5,408,689	108,684,118	38,065,832
Japan ..	131,302,360	..	..	..	2,351,379	1,834,229
Netherlands ..	12,666,280	..	..	..	6,931,088	8,052,255
Poland ..	12,395,640	..	..	..	1,536,992	5,196,373
United States of America	25,739,280	243,840,900	230,193,217	288,967,208	302,771,801	118,869,072
Other Foreign Countries	23,076,140	2,902,791	7,541,805	13,594,473	49,366,992	35,793,374
Total ..	762,880,220	455,115,413	496,717,082	711,358,140	1,019,450,272	774,222,920

(ii) *Scoured and Washed and Carbonized including Tops, Noils and Waste*—Quantities. The exports of "scoured and washed" wool, whether carbonized or not, including tops, noils and waste during the periods shown were as follows :—

EXPORTS OF WOOL—SCOURED AND WASHED AND CARBONIZED INCLUDING TOPS, NOILS AND WASTE : AUSTRALIA.

(lb.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
United Kingdom ..	34,520,040	24,746,603	29,250,478	22,907,495	64,405,087	73,904,397
Canada ..	4,376,340	7,913,794	8,567,011	9,602,450	14,650,185	11,689,692
Other British Countries	1,200,920	8,732,929	7,092,741	8,318,004	6,537,212	7,660,211
Belgium ..	8,235,440	..	..	6,967,868	20,202,636	14,715,133
France ..	9,399,940	..	..	1,598,747	11,189,505	17,766,974
Germany ..	3,012,780	..	..	..	7,310	761,629
Italy ..	451,520	..	..	151,994	7,692,729	4,979,942
Japan ..	1,127,940	..	..	..	..	106,958
Poland ..	1,009,820	..	..	..	..	9,034,426
United States of America	920,740	24,358,883	30,146,954	32,086,198	26,775,539	23,009,605
Other Foreign Countries	5,994,520	4,543,162	6,608,211	12,883,931	39,536,269	..
Total ..	70,160,000	70,295,371	81,665,395	94,516,687	190,996,472	163,628,967

(iii) *Total Value of Exports.* The value of wool exported from Australia during the five years ended 1947-48 averaged 35.9 per cent. of the value of the exports of merchandise of Australian origin, and during 1947-48 the proportion was 33.9 per cent. The value during the period under review, together with the principal countries to which wool was exported, is shown in the following table.

VALUE OF WOOL EXPORTS: AUSTRALIA.
(£A. f.o.b.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
United Kingdom ..	19,233,338	18,475,758	22,982,119	21,523,356	26,376,781	51,967,772
Other British Countries ..	703,032	3,956,730	3,218,303	3,726,687	4,739,949	5,720,160
Belgium ..	5,863,188	..	..	6,120,959	16,164,799	15,536,299
France ..	5,618,075	..	..	7,305,245	16,918,503	22,775,418
Germany ..	2,602,447	..	..	..	93,843	3,893,703
Italy ..	1,339,569	..	..	445,439	11,600,720	7,478,336
Japan ..	7,726,952	..	..	..	203,601	399,372
Netherlands ..	776,933	..	..	34,080	1,348,189	2,015,117
Poland ..	702,676	..	..	..	190,432	1,122,663
United States of America ..	2,251,946	22,281,578	21,453,319	26,948,889	35,704,749	25,329,176
Other Foreign Countries ..	1,859,189	1,053,352	1,732,870	3,155,742	12,787,131	12,509,067
Total ..	48,767,345	45,767,418	49,386,611	69,260,397	126,128,697	148,747,083

12. **Local Sales of Wool.**—Under pre-war conditions buyers from the United Kingdom, France, Belgium, Germany and other European countries, and from America, Japan, China and India attended the sales conducted in Sydney, Newcastle, Albury, Melbourne, Geelong, Ballarat, Brisbane, Adelaide, Perth, Hobart and Launceston. In 1946-47, following the cessation of the acquisition scheme which ended with the 1945-46 season, auction sales were resumed at those centres and commenced at Goulburn. Since the resumption of auction sales, there has been a greater quantity of wool disposed of locally and over 95 per cent. of Australia's production is now disposed of in this manner.

13. **Value.**—Wool is the chief factor in the pastoral wealth of Australia, and the nation's prosperity is largely dependent upon the satisfactory sale of the clip. During the three years ended 1948-49 the price of greasy wool sold in the selling centres of Australia averaged 37.35d. per lb. compared with the average United Kingdom contract price of 14.59d. per lb. during the years 1939-40 to 1945-46 and the average selling price of 11.5d. per lb. during the ten years ended 1938-39. The average for the nine years ended 1928-29 was 18d. per lb., and for the seven years ended 1913-14, 9d. per lb. The heavy decline in the price of wool which commenced in 1929-30 continued during the next three years. In 1933-34, prices rose in a remarkable manner, averaging 15.84d. per lb., compared with 8.72d. per lb. for the previous year, an increase of 81.6 per cent. A decline in 1934-35 was succeeded by a period of rising prices in the two years following, but in 1937-38 and in 1938-39 prices again receded.

As mentioned in paragraph 7 above, the price of wool during the 1939-45 War was determined by the British Government wool contract. The price fixed for the years 1939-40 to 1941-42 was 13.4375d. per lb., and for the years 1942-43 to 1945-46, 15.45d. per lb. With the return to auction sales since 1945-46, the average price of greasy wool sold rose to 24.49d. per lb. in 1946-47 and reached the record figures of 39.50d. per lb. in 1947-48 and 48.07d. per lb. in 1948-49. The average price in 1948-49 was 211 per cent. greater than the 1945-46 contract price and 318 per cent. above the average for the ten years ended 1938-39.

The effect of fluctuating wool values upon the national income is reflected in the following figures. Based upon appraisement in each State plus certain adjustments as recorded by the State Statisticians, the gross value of the wool clip for Australia for 1942-43 amounted to £73,017,000 and for 1943-44 to £75,124,000 compared with £42,043,000 realized during 1938-39 under open market conditions. The value of the 1944-45 and 1945-46 clips declined to £64,804,000 and £58,597,000 respectively, as a result of decreased production. In 1924-25 when the record pre-war price was realized, the value was £81,430,000, and in the year 1930-31, £34,804,000. With the remarkable increases in post-war wool prices, the value of the wool clip rose to £96,858,000 in 1946-47, to £156,998,000 in 1947-48 and to £202,000,000 in 1948-49.

The following table shows the average price in Australian currency, per lb. of greasy wool, determined by the British Government wool contract for the years 1943-44 to 1945-46 compared with the average auction-room price of greasy wool in Australia for 1938-39 and 1946-47 to 1948-49 as compiled by the National Council of Woollselling Brokers. This latter price represents the average price realized for all greasy wool of whatever type or quality marketed during the year indicated.

WOOL : AVERAGE MARKET PRICE PER LB.

(d.)

Description.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Greasy ..	(a) 10.39	(b) 15.45	(b) 15.45	(b) 15.45	(a) 24.49	(a) 39.50	(a) 48.07

(a) National Council of Woollselling Brokers.
sterling.

(b) The equivalent of the contract price of 12.34d.

Measured in terms of Australian, sterling, and gold currencies the approximate values of greasy wool per lb. during the years 1936-37 to 1938-39 and 1942-43 to 1948-49 were as follows:—

GREASY WOOL : AVERAGE VALUES PER LB.

(d.)

Year.	Australian Currency.	Sterling.	Gold Prices.
1936-37	16.48	13.16	8.03
1937-38	12.51	9.99	6.15
1938-39	10.39	8.30	4.84
1942-43	15.45	12.34	6.28
1943-44	15.45	12.34	6.28
1944-45	15.45	12.34	6.20
1945-46	15.45	12.34	6.10
1946-47	24.49	19.55	9.67
1947-48	39.50	31.54	15.59
1948-49	48.07	38.38	18.97

The average values shown in sterling and gold currencies have been calculated by converting the average prices shown in Australian currency on the basis of the average rates of exchange and the average gold prices between the months of September and June in each year. Though not exact these results will suffice for general purposes.

14. United Kingdom Importation of Wool.—The important position which Australia occupies in the supply of wool to the United Kingdom is indicated in the following statement of the quantities of wool imported into that country during 1938 and each year 1944 to 1948 from the principal wool-producing countries.

WOOL (a) : IMPORTS INTO UNITED KINGDOM.

Country of Origin.	1938.	1944.	1945.	1946.	1947.	1948.
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Australia	365,59	292,656	350,470	229,668	292,947	332,033
New Zealand	197,995	157,618	64,894	185,645	211,381	226,152
Union of South Africa ..	106,601	31,162	66,267	38,970	58,057	57,511
India	46,049	18,619	15,816	10,798	(b)20,985	(b)23,115
Falkland Islands	1,426	4,697	3,595	2,813	4,946	4,501
Eire	8,277	3,735	3,456	1,638	5,158	5,994
Other British Countries ..	4,566	7	12	421	2,344	1,821
Argentina	79,303	1	..	4,034	8,659	4,447
Uruguay	22,073	..	..	989	1,058	78
Other Foreign Countries ..	49,517	1	140	281	15,050	19,610
Total Quantity	881,326	508,496	504,650	475,257	620,585	675,262
Total Value (£'000 sterling)	40,996	35,400	35,384	37,744	59,882	86,335

(a) Greasy and scoured.

(b) Includes Pakistan.

Australian wool represented 53.8 per cent. of the total quantity imported into the United Kingdom during the five years ended 1948. New Zealand supplied 30.4 per cent. and South Africa 9.0 per cent. while the total quantity received from British countries constituted 98.0 per cent. of all United Kingdom imports.

15. **Principal Importing Countries and Sources of Supply.**—The previous issue of the Official Year Book (No. 37) included a table which furnished, in respect of the principal importing countries, details of their production and imports of wool for 1938, together with the chief sources of supply. Complete details are not yet available for later years.

§ 6. Trade in Hides and Skins.

1. **Extent of Trade.**—In addition to the hides and skins treated locally, considerable quantities are exported: the value of cattle and horse hides, and sheep and other skins sent overseas during the five years ended 1947-48 amounted to £52,984,317, or an average of £10,596,863 per annum.

2. **Sheepskins with Wool.**—The exports of sheepskins with wool, aggregating £21,365,065 during the five years above, constitute an important item in the values referred to in the preceding paragraph, although the largest export in this period was that of rabbit skins valued at £24,681,959. During 1938-39 France was the largest purchaser of sheepskins with wool, taking 74 per cent. of the total consignments, while the United Kingdom ranked next with 15 per cent., followed by Germany with 7 per cent. In 1947-48, France obtained 74 per cent. of total exports, and the United Kingdom 18 per cent. The exports of sheepskins with wool during each of the years 1943-44 to 1947-48 compared with the average for the years 1934-35 to 1938-39 were as follows:—

EXPORTS OF SHEEPSKINS WITH WOOL : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number	12,009,135	3,220,448	6,716,400	18,811,654	18,189,641	11,232,934
Value £A. f.o.b.	2,779,523	1,000,386	1,489,602	4,363,835	7,090,560	7,420,682

3. **Sheepskins without Wool.**—Up to 1943-44 sheepskins without wool were exported chiefly to the United States of America. During the year mentioned this country accounted for 97 per cent. of the total shipments while the remaining 3 per cent. were exported to the United Kingdom, Canada and the U.S.S.R. There has, however, since been a decline in shipments to the United States of America and an increase in the quantities shipped to the United Kingdom and other countries; in 1947-48 the United States of America received 50 per cent. of total shipments; the United Kingdom 26 per cent. and other countries 24 per cent. Quantities and values for the five years 1943-44 to 1947-48 compared with the average for the years 1934-35 to 1938-39 are shown in the table hereunder:—

EXPORTS OF SHEEPSKINS WITHOUT WOOL : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number	807,690	3,651,958	4,010,146	2,850,201	2,538,287	906,512
Value £A. f.o.b.	69,600	337,374	343,142	243,126	439,059	148,675

4. *Hides.*—(i) *Exports.* The export trade in cattle hides during 1947-48 was distributed as follows:—United Kingdom, £153,314; Italy, £69,718; Netherlands, £23,277; other countries, £66,253.

The exports during each of the five years 1943-44 to 1947-48 compared with the average for the years 1934-35 to 1938-39 are shown in the table below:—

EXPORTS OF CATTLE HIDES : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number	956,552	171,421	157,432	189,863	117,164	101,681
Value £A. f.o.b.	791,730	273,044	206,925	229,542	328,713	312,562

Calfskins exported during the five years ended 1947-48 numbered 18,247 valued at £14,559. Exports of horse hides during the same period numbered 127,628, valued at £237,245.

(ii) *Imports.* The imports of cattle hides and calfskins are fairly large, the chief source of supply being New Zealand and the Pacific Islands. The quantities and values of cattle hides, including calfskins, imported into Australia during the years 1943-44 to 1947-48 compared with the average for the years 1934-35 to 1938-39 were as follows:—

IMPORTS OF CATTLE HIDES AND CALFSKINS : AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Quantity .. cwt.	70,781	47,130	50,355	60,600	62,615	26,554
Value £A. f.o.b.	278,658	200,684	236,186	416,205	729,119	213,367

5. *Furred Skins.*—The exports of furred skins were valued as follows:—

EXPORTS OF FURRED SKINS : AUSTRALIA.

(£A. f.o.b.)

Description.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Rabbit	1,150,463	4,493,699	3,864,263	16,290,938	16,074,886	13,958,173
Opossum	124,627	37,593	135,936	86,903	97,377	15,176
Kangaroo	173,128	210,889	338,238	477,330	1,238,397	366,904
Fox	57,803	272,389	78,666	52,845	15,258	7,369
Wallaby	17,584	50,082	19,885	26,570	41,828	14,380
Other	11,215	53,060	72,588	2,191	3,381	1,129
Total	1,534,820	5,117,712	4,508,976	6,936,777	7,471,127	4,363,131

(a) Includes hare skins.

These skins were shipped principally to the United States of America, the United Kingdom and Canada, the values taken by each in 1947-48 being shown in the following table:—

FURRED SKINS : EXPORTS TO PRINCIPAL COUNTRIES OF DESTINATION, 1947-48.

(£A. f.o.b.)

Country.	Rabbit Skins. (a)	Kangaroo Skins.	Fox Skins.	Other (Opossum, Wallaby, etc.).	Total.
United Kingdom ..	114,475	10,878	5,919	16,273	147,545
United States of America ..	3,646,679	349,802	1,400	12,519	4,010,400
Canada	85,503	736	..	..	86,239
Other Countries	111,516	5,488	50	1,893	118,947
Total	3,958,173	366,904	7,369	30,685	4,363,131

(a) Includes hare skins.

6. Marketing of Hides and Skins.—(i) *Sheepskins with Wool.* Details of the war-time agreement between the United Kingdom and Commonwealth Governments for the purchase by acquisition of the “exportable surplus” of woolled sheepskins in Australia were given in Official Year Book No. 37, page 886.

The contract with the United Kingdom expired on 30th June, 1946 and, since then sheepskins have been marketed principally at open auction with export freely permitted as in pre-war times.

Owing to the high world parity price levels of wool and pelts, sheepskin prices have been very high since the return to open marketing.

(ii) *Sheep and Lamb Pelts.* Pelt prices rose rapidly overseas in the war years, and by 1944 it had become essential to establish some form of marketing control in order to safeguard the Australian sheep leather tanning industry. The Sheep and Lamb Pelt Advisory Committee was established to allocate to tanners their current requirements from the production of Australian fellmongeries.

The Committee operated on a voluntary basis under the aegis of the Hide and Leather Industries Board.

The “two-price” problem continued in the post-war period and it was found necessary to introduce a Government subsidy arrangement based largely on the activities of the Committee. With the termination of the subsidy and the removal of price control on pelts the need for the Committee no longer existed and it has ceased to function. Pelts have reverted to open marketing without any Government control.

(iii) *Hides and Leather.* Late in 1939 it became necessary to introduce a scheme for the control of the marketing of hides and leather and suitable action was taken by Regulations under the National Security Act. The Australian Hide and Leather Industries Board was appointed to administer the scheme.

All cattle hides and yearling and calf skins were to be submitted for appraisalment in accordance with a Table of Limits prepared by the Board. On appraisalment they were acquired by the Board acting on behalf of the Commonwealth and thereupon became the property of the Commonwealth. The owners of the hides and skins immediately prior to acquisition received compensation at varying rates determined by the Minister from time to time. Hides and skins acquired by the Board were sold on behalf of the Commonwealth. Tanners’ purchases of hides were regulated and exports of hides, skins and leather were controlled. Further details of the war-time operations of the scheme will be found in Official Year Book No. 37, page 887.

World parity prices of hides and leather are still far above Australian domestic price levels and the Commonwealth Government found it necessary to continue in 1948 the marketing control scheme which had operated since 1939. However, the Commonwealth Government was not prepared to carry on the scheme after 31st December, 1948, under its extended war-time powers and it was supplanted in 1949 by a similar marketing scheme operated under uniform legislation passed by the Commonwealth and the six State Governments.

For the purpose of administering the scheme the Australian Hide and Leather Industries Board was re-constituted under the Commonwealth Hide and Leather Industries Act 1948.

(iv) *Rabbit Skins.* A marketing control scheme for rabbit skins was introduced under the National Security (Rabbit Skins) Regulations on 10th June, 1940. After the outbreak of war, rabbit skin prices rose sharply owing to the keen demand from overseas. In order that the prices of military and civilian hats in Australia might be kept at reasonable levels and that sufficient skins should be available to Australian hat manufacturers at prices which would enable them to produce hats at those price levels, a scheme of marketing control became necessary.

The Australian Rabbit Skins Board was appointed to administer the scheme. The basis of the scheme has been the payment to hat manufacturers of compensation equivalent to the difference between appraised prices in a Table of Limits prepared by the Board, which are based on a Commonwealth Prices Commission determination, and ruling open market prices.

Funds for the payment of such compensation were provided by collections from a levy imposed on the export of rabbit skins under the Rabbit Skins Export Charges Act 1940. From 1941 onward rabbit skin prices rose steeply, reaching a peak in 1946. Since 1946 they have declined to the present relatively low levels. The rate of export levy fluctuated according to the state of the Board's finances. In some periods the levy was entirely suspended, whilst the highest rate it reached was 18d. per lb. The imposition of the levy was finally suspended in 1948 and the scheme terminated in April, 1949.

§ 7. Tallow.

1. *Production.*—Australia's production of tallow is in excess of local requirements and considerable quantities are normally available for export. The recorded production in factories is incomplete as production in establishments which do not come within the definition of a factory is excluded. More complete details, but on a calendar year basis, are, however, available. These relate to production in all slaughtering establishments and are shown in the following table for each year 1943 to 1948.

TALLOW : PRODUCTION IN SLAUGHTERING ESTABLISHMENTS, AUSTRALIA.
(cwt.)

Type.	1943.	1944.	1945.	1946.	1947.	1948.
Edible	1,152,825	1,050,124	898,831	354,934	437,232	524,690
Inedible	315,423	300,017	222,533	712,840	618,990	670,631
Total	1,468,248	1,350,141	1,121,364	1,067,774	1,056,222	1,195,321

2. **Consumption.**—Details of net exports and consumption in factories are given in the following table for the five years 1943-44 to 1947-48 in comparison with 1938-39 :—

TALLOW : NET EXPORTS AND CONSUMPTION IN FACTORIES, AUSTRALIA.

(cwt.)

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Net Exports ..	5560,241	5590,676	5421,573	146,445	73,744	87,689
Consumption by Factories	539,095	896,213	900,363	850,095	819,947	946,279

(a) Inedible only.

3. **Marketing.**—A modified control operates on the marketing of tallow, tallow products and derivatives. Exports are closely regulated. In respect of tallow shipped overseas the excess returns received over the fixed Australian domestic prices are paid by the exporters into a pool or equalization fund, from which a distribution is made to tallow producers generally.

The amounts available for distribution to tallow producers from the 1948-49 No. 5 Pool total over £1,600,000 and the general dividend will be in the vicinity of £15 per ton. A quantity and price arrangement has been made with the United Kingdom for sales in 1949-50.

CHAPTER XX.

AGRICULTURAL PRODUCTION.

NOTE.—Except where otherwise stated, the “agricultural” years hereafter mentioned are taken as ending on 30th June.

§ 1. Introductory.

A brief reference to the attempts at cultivation by the first settlers in New South Wales and to the discovery of suitable agricultural land on the Parramatta and Hawkesbury Rivers prior to the year 1813 and west of the Blue Mountains thereafter is contained in early issues of the Official Year Book. (*See No. 22, p. 670.*)

§ 2. Progress of Agriculture.

1. *Early Records.*—In an “Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797”, Governor Hunter gives the acreage of crops as follows:—Wheat, 3,361 acres; maize, 1,527 acres; barley, 26 acres; potatoes, 11 acres; and vines, 8 acres.

At a muster taken in 1808 the following was the return of crops:—Wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

By the year 1850 the area of crops had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850 the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area of crops declining from 491,000 acres in 1850 to 458,000 acres in 1854. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia exceeded a million acres. The largest increase took place in Victoria, which returned an area of 299,000 acres. For the same year South Australia had 264,000 acres in cultivation, Tasmania, 229,000 acres, and New South Wales, 223,000 acres.

2. *Progress of Cultivation.*—The following table shows the area of crops in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the eleven seasons ended 1948–49, and on page 963 there is a graph showing the area of crops in Australia from 1860 onward:—

AREA OF CROPS.
(Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
1860–61	246,143	387,283	3,353	359,284	24,705	152,860	..	..	1,173,628
1870–71	385,151	692,840	52,210	801,571	54,527	157,410	..	..	2,143,709
1880–81	606,277	1,548,809	113,978	2,087,237	63,902	140,788	..	..	4,560,991
1890–91	852,704	2,031,955	224,993	2,093,515	69,678	157,376	..	..	5,430,221
1900–01	2,446,767	3,114,132	457,397	2,369,680	201,338	224,352	..	..	8,813,666
1910–11	3,386,017	3,952,070	667,113	2,746,334	855,024	286,920	360	..	11,893,838
1920–21	4,405,143	4,489,503	779,497	3,231,083	1,804,987	297,383	296	1,966	15,069,858
1930–31	6,811,247	6,715,660	1,144,216	5,426,075	4,792,017	267,632	1,550	5,419	25,163,816
1938–39	7,049,357	5,019,299	1,734,789	4,724,090	4,719,254	243,048	1,116	6,827	23,497,780
1939–40	6,381,531	5,002,362	1,726,091	4,541,614	4,331,299	258,038	340	8,119	22,249,394
1940–41	6,374,354	4,467,191	1,734,248	4,254,348	4,026,969	253,941	322	6,457	21,117,830
1941–42	5,929,553	4,734,613	1,621,336	3,976,232	3,852,092	280,970	(a)	5,549	20,450,345
1942–43	5,297,313	3,816,430	1,742,802	3,436,675	2,819,713	300,005	(a)	6,779	17,479,717
1943–44	4,797,385	3,462,537	1,757,396	2,760,778	2,782,414	334,933	(a)	6,769	15,902,212
1944–45	5,044,792	4,310,152	1,796,833	3,179,374	2,790,376	342,916	(a)	7,410	17,471,853
1945–46	6,087,566	5,327,122	1,822,108	3,824,128	2,944,879	411,824	(a)	8,846	20,426,473
1946–47	6,511,493	5,102,980	1,617,280	3,884,459	3,589,971	361,120	(a)	9,282	21,076,585
1947–48	7,168,068	5,023,149	1,848,539	3,851,855	4,026,201	342,311	(a)	11,409	22,271,532
1948–49	5,711,369	4,644,841	1,952,495	3,757,426	4,215,112	344,734	(a)	9,790	20,635,707

(a) Not available.

The progress of agriculture was practically uninterrupted from 1860 to 1915-16, when, as the result of a special effort to raise wheat during the 1914-18 War, 18,528,234 acres were cultivated in Australia. Four years later the area of crops declined to 13,296,407 acres owing to the accumulation of wheat stocks consequent upon the difficulty of securing freight space during the war years. After the termination of hostilities the area again began to expand and rose steadily to a new maximum of 25,163,816 acres in 1930-31. Thereafter the slump in wheat prices seriously depressed the agricultural industry and the area of crops receded to just under 20 million acres in 1935-36. Subsequently the area increased, and reached a maximum of 23½ million acres in 1938-39. Thereafter it declined to under 16 million acres in 1943-44, then rose in each succeeding year up to and including 1947-48, when 22.3 million acres were under crop. A fall to 20.6 million acres was recorded in 1948-49. Following the outbreak of war in 1939, the area under crop declined with each successive year until 1944-45, when the areas commenced to increase. This movement was contrary to the experience of the 1914-18 War when the decline did not occur until the third war-year. As the area under wheat in Australia constitutes a large proportion of the total areas cropped (62 per cent. during the five years ended 1948-49), fluctuations in the latter follow broadly the same pattern as changes in wheat areas.

3. **Area under Sown Pastures.**—In all the States there are considerable areas of grasses mainly sown on land from which scrub has been cleared or on land which it is desired to rest from cultivation. These areas, which are not included in "area of crops", have expanded from 5½ million acres in 1929-30 to approximately 14 million acres in 1948-49.

4. **Australian Agricultural Council.**—Arising out of a conference of Commonwealth and State Ministers on agricultural and marketing matters held at Canberra in December, 1934, a permanent organization known as the Australian Agricultural Council was formed. The Council consists of the Commonwealth Minister for Commerce and Agriculture and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principle functions of the Council are :—(i) the promotion of the welfare and development of agricultural industries generally; (ii) the improvement of the quality of agricultural products and the maintenance of high grade standards; (iii) to ensure, as far as possible, balance between production and available markets; and (iv) organized marketing, etc.

In addition, a permanent technical committee known as the Standing Committee on Agriculture was formed to act in an advisory capacity to the Council. Its functions are :—(i) to secure co-operation and co-ordination in agricultural research throughout Australia; (ii) to advise the Commonwealth and State Governments, either directly or through the Council, on matters pertaining to the initiation and development of research on agricultural problems; and (iii) to secure co-operation between the Commonwealth and States and between the States in respect of quarantine measures relating to pests and diseases of plants and animals, and to advise the Commonwealth and State Governments. The personnel of this Committee consists of the permanent heads of the State Departments of Agriculture, members of the Executive Committee of the Commonwealth Scientific and Industrial Research Organization, the Commonwealth Director-General of Health, the Secretary, Department of Commerce and Agriculture, the Director-General of Agriculture and a representative of the Commonwealth Treasury. The Council and the Standing Committee meet normally two or three times a year according to the nature and urgency of the problems to be discussed.

§ 3. Distribution, Production and Value of Crops.

1. **Distribution of Crops.**—The following table shows the areas in the several States and Territories of each of the principal crops for the season 1947-48. Similar details for the season 1946-47 appear in Part II. of *Production Bulletin* No. 41.

AREA OF PRINCIPAL CROPS, 1947-48.

(Acres.)

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	A.C.T.	Aust.
Cereals for									
Grain—									
Barley—									
2 Row ..	15,127	149,567	12,334	522,053	38,089	7,569	..	..	744,739
6 Row ..	8,351	14,622	4,876	40,352	25,047	580	..	2	93,830
Maize ..	86,979	7,968	127,703	..	90	7	..	1	222,748
Oats ..	609,207	650,119	24,974	308,783	494,589	17,076	..	486	2,105,234
Rice ..	26,208	..	..	..	..	..	..	..	26,208
Rye ..	694	8,148	..	..	..	..	..	..	36,072
Wheat ..	5,043,017	3,227,162	462,239	2,374,873	2,760,446	7,776	..	4,783	13,880,296
Hay ..	627,654	657,146	71,834	296,261	229,172	84,354	..	3,766	1,970,187
Green Fodder ..	488,028	(b) 46,100	511,115	141,452	400,100	116,482	..	2,044	1,705,321
Other Stock									
Fodder ..	5,751	11,255	19,421	13,851	14,386	15,015	..	20	79,699
Grass and other									
Seeds ..	9,659	11,746	4,688	20,119	9,925	4,262	..	..	60,399
Industrial Crops—									
Cotton ..	..	..	8,460	..	..	..	..	..	8,460
Broom Millet ..	3,294	422	172	..	..	..	..	..	3,888
Flax for Fibre ..	..	12,183	..	3,544	2,063	..	..	..	17,790
Hops ..	..	240	..	..	(c)	1,263	..	..	(d) 1,503
Sugar-cane—									
Productive ..	7,113	..	215,378	..	..	..	..	..	222,491
Unproductive	9,315	..	113,108	..	..	..	..	..	122,423
Tobacco ..	414	958	1,912	..	559	..	..	..	3,843
Vegetables—									
Legumes—									
Beans, Navy ..	2,441	28	1,119	..	..	10	..	..	3,598
Peas, Blue ..	..	714	..	70	..	6,878	..	..	7,662
Onions ..	568	6,722	2,378	583	475	19	..	6	10,751
Potatoes, ord-									
inary ..	21,911	59,400	10,664	6,202	6,955	40,382	..	115	145,629
Other veg-									
etables for									
human con-									
sumption ..	58,671	35,186	35,039	10,488	9,763	7,403	..	61	156,611
Vines—									
Bearing ..	14,930	41,438	2,691	55,645	8,670	..	..	3	123,377
Not Bearing ..	1,611	2,346	396	3,240	1,355	..	..	6	8,954
Orchards and									
other Fruit									
Gardens ..	98,901	71,513	38,665	28,338	22,063	30,739	..	101	290,320
All other Crops	28,224	8,166	179,373	972	458	2,291	..	15	219,499
Total Area ..	7,168,068	5,023,149	1,848,539	3,851,855	4,026,201	342,311	..	11,409	22,271,532

(a) Not available. (b) Excludes 46,915 acres of pasture land sown to lucerne and 102,255 acres sown to oats, for grazing. (c) Not available for publication. Included with "All other Crops". (d) Incomplete.

2. **Relative Areas of Crops in States and Territories.**—The proportion of each of the crops cultivated to the extent of over 100,000 acres in the various States and Territories on the total area of crops for the season 1947-48 is shown in the next table. Similar details for the season 1946-47 appear in Part II. of *Production Bulletin* No. 41. In four of the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive crop. In Queensland the most extensive crops are green fodder, wheat and sugar-cane, and in Tasmania, green fodder, hay and potatoes.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for grain only, representing over 60 per cent. of the total area of crops in 1947-48.

RELATIVE AREAS UNDER CROP, 1947-48.

(Per cent.)

Crop.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
Wheat (Grain) ..	70.35	64.25	25.00	61.66	68.56	2.27	..	41.92	62.32
Oats (Grain) ..	8.50	12.94	1.35	8.02	12.29	4.99	..	4.26	9.45
Hay ..	8.76	13.08	3.89	7.69	5.69	24.64	..	33.01	8.85
Green Fodder(b) ..	6.81	0.92	27.65	3.67	9.94	34.03	..	17.92	7.66
Barley (Grain) ..	0.33	3.27	0.93	14.60	1.57	2.38	..	0.02	3.77
Sugar-cane ..	0.23	..	17.77	..	..	..	..	..	1.55
Orchards and Fruit Gardens ..	1.38	1.42	2.09	0.73	0.55	8.98	..	0.88	1.30
Maize (Grain) ..	1.21	0.16	6.91	..	..	..	..	0.01	1.00
Potatoes, ordinary ..	0.31	1.18	0.58	0.16	0.17	11.80	..	1.01	0.65
Vineyards ..	0.23	0.87	0.17	1.53	0.25	..	..	0.08	0.59
All other ..	1.89	1.91	13.66	1.94	0.98	10.91	..	0.89	2.86
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	..	100.00	100.00

(a) Not available.

(b) Includes green forage except in Victoria.

3. Area of Principal Crops in Australia.—The area of the principal crops during each of the five seasons ended 1947-48, compared with the average for the decennium ended 1938-39 is shown hereunder:—

AREA OF PRINCIPAL CROPS : AUSTRALIA.

('000 Acres.)

Crop.	Average, ten years ended 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Cereals for Grain—						
Barley, 2 Row ..	428	357	500	593	663	745
Maize ..	295	283	257	236	260	223
Oats ..	1,393	1,415	2,034	1,949	1,728	2,105
Rice ..	22	41	25	28	32	26
Wheat ..	14,345	7,875	8,463	11,425	13,180	13,880
Hay ..	2,994	2,044	2,409	2,757	2,006	1,970
Green Fodder ..	1,272	2,265	2,043	1,806	1,602	1,705
Vegetables—						
Beans and Peas ..	49	57	37	35	19	11
Onions ..	8	10	12	12	9	11
Potatoes, ordinary ..	130	192	242	176	145	146
Other vegetables for human consumption ..	(a) 34	199	240	231	186	156
Industrial Crops—						
Cotton ..	43	41	17	8	8	8
Hops ..	1	1	1	1	1	2
Sugar-beet ..	3	1	..	..	1	1
Sugar-cane ..	332	336	326	337	324	345
Tobacco ..	12	7	5	4	4	4
Vineyards ..	118	129	129	129	130	132
Orchards ..	276	262	263	270	280	290
All other Crops ..	203	387	469	429	499	512
Total ..	21,958	15,902	17,472	20,426	21,077	22,272

(a) Market Gardens.

4. Weights and Measures.—The production of agricultural commodities in Australia is recorded either in terms of capacity or weight. When measured in terms of capacity the unit is the bushel of 2,218.192 cubic inches or gallon of 277.274 cubic inches. When measured in terms of weight, the unit adopted is either the long ton of 2,240 lb. (except in the case of flour, bran and pollard, when the short ton of 2,000 lb. is used), the hundred-weight (cwt.) of 112 lb. or pound (lb.).

The production of cereals and fruit is recorded in bushels, the production of wine in gallons, while hay, vegetables, grapes and industrial crops are measured by weight, generally in terms of long tons or cwt.

In the following table the weights adopted per bushel are given for the more important cereals, fruits, etc. Several types of cases are used for fruits, but in determining the average weights shown below, that with a capacity of 2,223 cubic inches was adopted. The packed weight of a bushel of fruit also is subject to considerable variation according to the kind and variety of fruit.

Data compiled by the State Departments of Agriculture made available to this Bureau were used in determining these average weights.

APPROXIMATE BUSHEL EQUIVALENTS.

Commodity.	Approximate Bushel Equivalent in lb.	Commodity.	Approximate Bushel Equivalent in lb.
Cereals—		Fruit—continued.	
Barley	50	Bananas	56
Canary Seed	56	Cherries	48
Maize	56	Citrus—	
Millet	60	Oranges	48
Oats	40	Mandarins	48
Panicum	60	Lemons	48
Rice (Paddy)	42	Grape Fruit	42
Rye	60	Custard Apples	35
Sorghum	60	Figs	44
Wheat	60	Mangoes	40
Legumes—		Nectarines	50
Beans	60	Passion Fruit	34
Peas	60	Peaches	45
Other Crops—Flax Seed	56	Pears	45
Fruit—		Persimmons	44
Apples	42	Plums and Prunes	58
Apricots	48	Quinces	42

5. Production of Principal Crops in Australia.—The following table shows the production of the principal crops for the five years ended 1947-48, and for the decennium ended 1938-39 :—

PRODUCTION OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Cereals for Grain—							
Barley, 2 Row	'ooo bus.	7,480	6,397	4,188	9,581	10,558	18,937
Maize	" "	7,228	7,433	6,463	5,729	5,808	6,168
Oats	" "	16,437	17,712	8,970	25,774	15,566	40,697
Rice	" "	2,005	4,015	1,693	2,735	2,978	2,676
Wheat	" "	169,398	109,720	52,880	142,410	117,262	220,116
Hay	" tons	3,490	2,717	1,994	3,493	2,357	3,008
Vegetables—							
Beans and Peas	" "	20	20	16	10	8	5
Onions	" "	43	47	67	67	45	86
Potatoes, ordinary	" "	351	599	881	646	544	498
Industrial Crops—							
Cotton, Unginned	" lb.	15,667	9,540	8,508	1,819	3,022	2,064
Hops	" "	2,127	2,999	2,594	2,222	2,495	(a) 2,738
Sugar (from Beet)	" tons	5	0.7	..	..	1.0	0.6
Sugar (from Cane)	" "	658	524	670	666	552	605
Tobacco (Dried leaf)	" lb.	5,336	4,633	2,844	2,505	3,994	2,484
Vineyards—							
Grapes	" tons	381	527	358	447	435	508
Wine made	" gals.	16,330	19,865	14,419	25,858	33,190	34,159
Raisins and Currants	" tons	70	103	69	74	65	85

(a) Incomplete.

6. **Average Yield per Acre of Principal Crops in Australia.**—The following table shows the yield per acre for Australia of the principal crops for the five years ended 1947-48 and the decennium ended 1938-39.

AVERAGE YIELD PER ACRE OF PRINCIPAL CROPS : AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Cereals for Grain—							
Barley, 2 Row ..	Bushel	17.49	17.89	8.38	16.15	15.02	25.43
Maize ..	"	24.53	26.29	25.15	24.30	22.36	27.60
Oats ..	"	11.80	12.52	4.41	13.22	9.01	19.33
Rice ..	"	93.00	98.67	68.82	96.40	93.08	102.12
Wheat ..	"	11.81	13.93	6.25	12.46	8.90	15.86
Hay ..	Ton	1.17	1.33	0.83	1.27	1.18	1.53
Vegetables—							
Onions ..	"	5.54	4.61	5.59	5.38	4.77	8.00
Potatoes, ordinary ..	"	2.71	3.12	3.64	3.67	3.76	3.42
Industrial Crops—							
Cotton, Unginned (a) ..	lb.	366	230	488	236	382	244
Hops (a) ..	"	2,003	2,350	2,044	1,754	1,702	1,831
Sugar (from Beet) ..	Ton	1.40	0.84	..	..	1.35	1.06
Sugar (from Cane) (a) ..	"	2.76	2.29	2.96	2.83	2.43	2.72
Tobacco (Dried leaf) ..	lb.	463	700	596	631	889	646
Vineyards—							
Grapes (a) ..	Ton	3.45	4.26	2.89	3.62	3.52	4.12
Wine (a) ..	Gallon	340	402	290	471	570	608
Raisins and Currants (a) ..	Ton	1.28	1.57	1.05	1.23	1.14	1.43

(a) Per acre of productive crops.

7. **Gross Value of Agricultural Production in Australia.**—The following table shows the gross value of recorded agricultural production at the principal markets in Australia for the years 1938-39 and the five years ended 1947-48 :—

GROSS VALUE OF AGRICULTURAL PRODUCTION : AUSTRALIA.
(£'000.)

Crop.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Cereals for Grain—						
Barley, 2 Row ..	1,417	1,856	(a) 1,324	(a) 3,007	(a) 4,483	15,044
Maize ..	1,503	2,530	2,189	2,054	2,119	2,340
Oats ..	2,085	2,471	(a) 2,054	(a) 4,573	(a) 3,432	12,823
Rice ..	540	983	416	672	892	950
Wheat (a) ..	21,989	28,387	17,409	50,193	52,189	(c) 143,927
Hay ..	12,704	13,488	13,119	18,445	11,586	17,096
Green Fodder ..	2,999	(b) 4,170	3,646	3,854	3,627	3,518
Vegetables—						
Beans and Peas (Dry) ..	253	599	686	493	495	608
Onions ..	306	696	1,129	961	744	1,245
Potatoes, ordinary ..	3,649	7,233	10,969	7,989	6,734	6,543
Other vegetables for human consumption ..	(d) 2,473	14,864	16,361	15,124	12,838	12,025
Industrial Crops—						
Cotton, Unginned ..	(a) 230	212	186	(a) 42	66	46
Hops ..	183	238	230	226	278	318
Sugar-beet ..	27	17	9	3	27	19
Sugar-cane ..	9,178	8,521	10,334	10,400	9,035	11,422
Tobacco (Dried leaf) ..	360	536	316	328	538	405
Vineyards ..	3,924	7,384	5,248	6,505	6,727	8,398
Orchards ..	(a) 9,095	19,406	17,021	(a) 18,750	17,933	22,066
All other Crops ..	3,336	2,978	3,780	4,250	4,658	6,421
Total, Gross Value ..	76,851	116,569	107,026	147,869	138,401	265,214

(a) Includes Governmental assistance.
revision.

(b) Excludes Western Australia.

(c) Subject to

(d) Market Gardens.

8. **Value of Production—Gross and Net.**—(i) *General.* Uniform methods for arriving at the gross and net values of production in the various States were finally determined at a Conference of Statisticians held in March, 1935. The returns for the year 1933-34 and subsequent years have been valued on the new basis, and a revaluation was made

for the years back to 1928-29. A more detailed reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used will be found in Chapter XXVIII. "Miscellaneous".

In computing the net value of production no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant; consequently the figure stated is inflated to that extent.

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1946-47 AND 1947-48.

(£.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Production. (a)	Deprecia- tion (esti- mated).
				Seed used, and Fodder for Farm Stock.	Value of other Materials used in pro- cess of pro- duction.		
1946-47.(b)							
New South Wales ..	29,988,000	3,838,000	26,150,000	4,663,000	e 1,136,000	20,351,000	(d)
Victoria ..	41,055,961	4,617,162	36,438,799	5,483,773	1,689,373	29,265,653	1,000,000
Queensland ..	20,373,000	2,050,000	18,323,000	1,530,000	1,420,000	15,373,000	940,000
South Australia ..	24,413,282	2,471,874	21,941,408	1,727,192	1,342,900	18,871,316	594,493
Western Australia..	16,183,433	1,405,649	14,777,784	1,255,979	1,679,962	11,841,843	582,040
Tasmania ..	6,317,190	1,350,550	4,966,640	1,388,750	(c) 239,180	3,338,710	128,000
Total ..	138,330,866	15,733,235	122,597,631	16,048,694	7,507,415	99,041,522	e 3,244,533

1947-48.(b)

New South Wales ..	90,588,000	11,129,000	79,459,000	7,084,000	e 1,372,000	71,003,000	(d)
Victoria ..	61,250,238	5,874,245	55,375,993	5,293,990	1,909,151	48,172,852	1,100,000
Queensland ..	30,280,000	3,150,000	27,130,000	2,300,000	2,100,000	22,730,000	1,390,000
South Australia ..	47,433,686	3,971,071	43,462,615	2,126,485	1,397,673	39,938,457	594,493
Western Australia..	28,172,810	2,023,659	26,149,151	1,229,549	1,955,791	22,963,811	603,154
Tasmania ..	7,335,240	1,831,160	5,504,080	1,293,590	(c) 273,110	3,937,380	126,660
Total ..	265,059,974	27,979,135	237,080,839	19,327,614	9,007,725	208,745,500	e 3,814,307

(a) No deduction has been made for depreciation and maintenance. (b) Subject to revision.
 (c) No allowance made for costs of power, power kerosene, petrol and other oils. (d) Not available.
 (e) Incomplete.

(ii) *States 1938-39 to 1947-48.* In the following table the net value of agricultural production and the net value per head of population are given by States for the years 1938-39 to 1947-48:—

VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(a)(£.)							
1938-39 ..	11,804,000	5,619,765	11,615,000	5,489,228	4,065,616	3,084,971	41,678,580
1939-40 ..	16,307,000	11,907,131	13,696,000	9,458,140	7,064,100	2,433,760	60,926,131
1940-41 ..	9,323,000	7,097,200	14,723,000	6,048,310	3,678,106	1,730,180	41,600,104
1941-42 ..	16,043,000	15,511,086	13,380,000	8,053,375	6,528,077	3,179,810	62,695,348
1942-43 ..	24,444,000	19,026,308	15,416,000	11,086,377	5,490,585	3,525,910	78,989,180
1943-44 ..	27,916,000	16,062,900	16,755,000	10,738,133	5,841,624	4,826,620	82,140,277
1944-45 ..	17,499,000	14,899,962	18,308,000	8,997,864	7,079,309	5,852,060	72,636,195
1945-46 ..	39,345,000	20,326,838	18,731,000	13,780,913	8,098,960	4,344,410	104,627,151
1946-47(b)	20,351,000	29,265,653	15,373,000	18,871,316	11,841,843	3,338,710	99,041,522
1947-48(b)	71,003,000	48,172,852	22,730,000	39,938,457	22,963,811	3,937,380	208,745,500

(a) No deduction has been made for depreciation and maintenance. (b) Subject to revision.

VALUE OF AGRICULTURAL PRODUCTION—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE PER HEAD OF MEAN POPULATION. (£ s. d.)							
1938-39 ..	4 6 4	3 0 0	11 10 5	9 4 6	8 14 2	12 19 7	6 0 3
1939-40 ..	5 18 4	6 6 3	13 8 3	15 15 11	14 19 3	10 2 9	8 14 0
1940-41 ..	3 6 10	3 14 1	13 6 0	10 2 0	7 15 2	7 3 7	5 17 7
1941-42 ..	5 14 0	7 19 2	12 18 3	13 5 10	13 14 11	13 4 7	8 15 6
1942-43 ..	8 11 10	9 13 7	14 16 5	18 2 11	11 10 2	14 11 9	10 19 3
1943-44 ..	9 18 7	8 2 1	15 17 9	17 8 6	12 4 3	19 15 4	11 5 11
1944-45 ..	6 0 7	7 9 1	17 2 8	14 8 9	14 12 0	23 13 11	9 17 8
1945-46 ..	13 8 4	10 1 8	17 5 7	21 16 9	16 10 6	17 7 1	14 1 9
1946-47 (a) ..	6 17 4	14 6 11	14 0 3	29 9 3	23 16 4	13 2 3	13 3 5
1947-48 (a) ..	23 12 4	23 5 8	20 8 6	61 4 7	45 2 7	15 0 10	27 6 5

(a) Subject to revision.

§ 4. Wheat.

1. **Royal Commission on the Wheat Industry.**—A Royal Commission was appointed in January, 1934, to inquire into and report upon the economic condition of the industries of growing, handling and marketing wheat, and the manufacturing, distributing and selling of flour and bread. A searching inquiry was made by the Commission and the results of its investigations were submitted in a series of five reports. The first and second reports covered the wheat-growing industry, the third that of baking, the fourth the flour-milling industry, while the fifth, completed in February, 1936, dealt with the history of the Commission's investigations and traversed the principal recommendations submitted.

Reference to the financial assistance to the wheat industry will be found in § 20. Bounties, hereafter.

2. **Wheat Costs of Production Committee.**—A Wheat Costs of Production Committee was appointed by the Commonwealth Government in February, 1947, to enquire into and report upon:—(i) the reasonable costs of production of wheat per bushel in Australia's main wheat-growing districts, and (ii) whether basic items of costs could be established as an index to periodical variations in costs of the production of wheat. The Committee in its report to the Commonwealth Government in March, 1948, found that the cost of growing wheat in the Commonwealth was 6s. per bushel at sidings and advised that basic items of cost could be established as an index to periodical variations in wheat production costs.

3. **Licensing of Areas Sown to Wheat, and Acreages Sown.**—The licensing of areas sown to wheat throughout Australia during each of the seasons 1941-42 to 1948-49 was operated under the direction of the Wheat Stabilization Board. The area allotted to each grower was fixed in proportion to the average area normally sown by him, principally in the three years 1938-39 to 1940-41. Although licensing continued during the seasons 1945-46 to 1948-49, growers were permitted to plant without restriction in those years. In Western Australia, growers' acreages during 1942-43 were restricted to a maximum of two-thirds of their basic acreage which restriction continued during the 1943-44 and 1944-45 seasons. During 1945-46 no such restriction was imposed but where growers voluntarily restricted the area sown to five-sixths or less of their basic acreage, compensation equal to one-sixth of their basic acreage was payable subject to the qualification that half of the area licensed for wheat was cropped for grain.

In the following table supplied by the Wheat Stabilization Board the basic acreage (i.e., the area normally sown by growers, principally in the three years 1938-39 to 1940-41) and the areas licensed to grow wheat for grain are shown for each State and the Australian Capital Territory for the years 1944-45 to 1948-49. Details of the area sown as well as the percentage that these areas bear to the area licensed are also given.

The Wheat Industry Stabilization Board ceased to function on 31st December, 1948 and the licensing of wheat areas was discontinued from that date. The details of areas licensed and numbers of licences issued for the year 1948-49 shown in the table following are incomplete.

WHEAT FOR GRAIN: LICENSED AND SOWN ACREAGES.
(⁰⁰⁰ Acres.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	Aust.
Basic Acreage	5,014	3,333	481	3,058	3,243	12	1	15,142
1944-45—								
Area licensed	3,992	2,562	523	2,215	(a) 1,980	3	2	11,277
Area sown	2,845	2,142	332	1,623	(a) 1,516	4	1	8,463
Area sown as a percentage of area licensed	71	84	63	73	76	133	75	75
Number of licences issued No.	21,566	15,810	3,675	14,743	8,683	(b)	(b)	(c) 64,477
1945-46—								
Area licensed (d)	4,880	3,570	524	2,829	(e) 2,559	3	2	14,367
Area sown	3,774	3,251	392	2,165	(e) 1,836	5	2	11,425
Area sown as a percentage of area licensed	77	91	75	77	72	167	100	80
Number of licences issued No.	23,340	18,099	3,436	15,507	8,475	132	30	69,019
1946-47—								
Area licensed (d)	5,540	4,087	618	3,240	3,364	4	3	16,856
Area sown	4,475	3,501	248	2,519	2,426	8	3	13,180
Area sown as a percentage of area licensed	81	86	40	78	72	200	100	78
Number of licences issued No.	24,983	21,190	4,400	17,690	10,093	189	26	78,571
1947-48—								
Area licensed (d)	6,100	3,723	671	3,050	3,477	6	5	17,032
Area sown	5,043	3,227	462	2,375	2,760	8	5	13,880
Area sown as a percentage of area licensed	83	87	69	78	79	133	100	81
Number of licences issued No.	26,494	20,354	4,785	17,732	9,679	213	32	79,289
1948-49—								
Area licensed (d)	5,843	3,431	747	2,801	3,648	(b)	5	(f) 16,475
Area sown	4,938	2,996	608	2,063	2,867	7	4	12,583
Area sown as a percentage of area licensed	69	87	81	74	79	(b)	80	(f) 76
Number of licences issued No.	25,338	19,297	5,292	17,287	10,072	(b)	24	(f) 77,310

(a) Compulsorily restricted by one-third. (b) Not available. (c) Excludes Tasmania and Australian Capital Territory. (d) Includes areas temporarily licensed on temporary wheat farms. (e) Restriction not compulsory but compensation paid where area voluntarily restricted. (f) Incomplete.

4. Legislation relating to Wheat Industry.—(i) *Financial Assistance to Wheat Growers.* Details of financial assistance rendered by the Commonwealth Government to wheat growers between the years 1931-32 and 1944-45 were given on page 1296 of Official Year Book No. 37.

(ii) *Stabilized Marketing.* A detailed survey of legislation relating to stabilization of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the permanent Wheat Stabilization Plan in 1948 were given in the Appendix to Official Year Book No. 37 (pp. 1295-1299).

(iii) *Wheat Stabilization Plan.* Briefly the principal provisions of the Wheat Stabilization Plan which is operated by the Australian Wheat Board conjointly with State Wheat Boards and similar authorities nominated by State Governments, are as follows :—

- (a) The Commonwealth Government has guaranteed a price for wheat grown and delivered to the Australian Wheat Board or other approved organizations for each season 1947-48 to 1952-53.
- (b) The price guaranteed was 6s. 3d. per bushel f.o.r. ports, bulk basis (this being related to costs of producing wheat in the 1947-48 season), subject to variation, as agreed upon by the Commonwealth Minister for Commerce and Agriculture in consultation with the appropriate State Ministers, in accordance with variations in the cost of producing wheat in subsequent seasons. Following reviews of wheat production costs, the guaranteed price was increased to 6s. 8d. per bushel f.o.r. ports, bulk basis for the 1948-49 season and to 7s. 1d. per bushel for the 1949-50 season. For the 1947-48 and 1948-49 seasons the price of wheat fixed for home consumption was the guaranteed price of 6s. 3d. and 6s. 8d. per bushel respectively, but for the 1949-50 season it remained unchanged from the previous year at 6s. 8d. per bushel. The additional 5d. per bushel payable to growers for wheat for home consumption in 1949-50 is being met by subsidy provided by the Commonwealth Government.

- (c) The guaranteed price applies in respect of the export from any one season's crop up to a maximum of 100 million bushels.
- (d) A Wheat Prices Stabilization Fund has been established by means of a tax on wheat exported. The tax applies when the export price is greater than the guaranteed price, the rate of tax being 50 per cent. of the difference between the two but not exceeding 2s. 2d. per bushel.
- (e) The Stabilization Fund will be drawn upon as required to meet the guaranteed price when this exceeds the export price. If amounts held in the Fund are at any time insufficient for this purpose, the deficiency will be provided by the Commonwealth Government from Consolidated Revenue.

(iv) *The Australian Wheat Board and the Stabilization Fund.* The Australian Wheat Board as reconstituted under the Commonwealth Wheat Industry Stabilization Act 1948, commenced to perform its functions under the Act on 18th December, 1948.

The provisions of the Commonwealth Wheat Stabilization Plan relating to the levy of a tax on wheat exported and the establishment of a Stabilization Fund were implemented by the Commonwealth Government under legislation passed in 1946 in respect of the 1945-46, 1946-47 and 1947-48 harvests, contributions to the Stabilization Fund amounting to about £7,000,000, £4,000,000 and £16,400,000 respectively. Contributions to the Fund from the 1948-49 harvest were approximately £12,500,000. Amounts contributed to the fund from the 1945-46 and 1946-47 harvests, which were equivalent to approximately 1s. 1½d. per bushel and 10½d. per bushel respectively, have been refunded to growers.

5. War-time and Post-war Marketing of Wheat.—(i) *General.* On page 908 of Official Year Book No. 37 an outline was given of the circumstances leading up to the establishment by the Commonwealth Government on 21st September, 1939 of the Australian Wheat Board under the National Security (Wheat Acquisition) Regulations.

(ii) *Australian Wheat Board.* Under the Wheat Acquisition Regulations the Board was empowered, subject to directions of the Minister for Commerce and Agriculture, to purchase, sell or dispose of wheat or wheat products, manage and control all matters connected with the handling, storage, protection, shipment, etc., of wheat acquired, and such other matters necessary to give effect to the regulations under which it was created. The Australian Wheat Board was reconstituted and vested with similar powers under the Commonwealth Wheat Stabilization Act 1948 for the purpose of administering the post-war Wheat Stabilization Plan (*see preceding Section*). The reconstructed Board commenced operations on 18th December, 1948.

(iii) *Wheat Acquired and Disposed of.* (a) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board up to 30th November, 1949 are shown in the following table:—

AUSTRALIAN WHEAT BOARD : WHEAT ACQUIRED TO 30th NOVEMBER, 1949.
(*000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
1 ..	1938-39A	6,226	2,805	..	5,884	2,925	..	17,840
2 and 3 ..	1939-40	66,688	46,960	6,255	38,130	37,370	41	195,444
4 ..	1940-41	16,919	9,985	5,287	13,818	17,575	75	63,659
5 ..	1941-42	41,235	48,135	2,680	27,738	34,076	78	153,944
6 ..	1942-43	44,709	40,213	4,403	34,660	17,978	22	141,990
7 ..	1943-44	40,880	17,227	4,599	18,141	13,853	57	94,757
8 ..	1944-45	12,167	941	5,837	6,758	13,079	39	38,821
9 ..	1945-46	54,889	25,621	7,492	18,162	17,742	23	123,929
10 ..	1946-47	8,635	44,482	444	24,818	20,521	68	98,968
11 and 11A ..	1947-48	89,416	44,402	10,017	29,572	31,126	59	204,594
12 ..	1948-49	58,352	46,661	13,544	23,514	32,825	103	174,999
Total to 30th November, 1949 ..	..	440,116	327,432	60,558	241,195	239,079	565	1,308,945

(a) Balance only.

(b) *Wheat Disposal.* Details relating to the disposal of this wheat are shown in the following table :—

**AUSTRALIAN WHEAT BOARD : DISPOSAL OF WHEAT
TO 30th NOVEMBER, 1949.**

('000 Bushels.)

Particulars.	To 30th November, 1944.	1945.	1946.	1947.	1948.	1949.	Total to 30th November, 1949.
Sold for export as wheat ..	194,313	2,742	19,820	13,314	104,253	67,225	401,667
Sold for export as flour ..	134,660	14,897	37,487	34,927	45,553	41,938	309,462
Sold for local consumption as flour	169,631	33,373	32,204	30,833	33,606	34,493	334,140
Sold for all other purposes ..	106,619	45,104	26,283	25,071	22,702	24,109	249,888

(iv) *Finance.* The Wheat Acquisition Regulations empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. The Wheat Industry Stabilization Act 1948 included similar provisions for advances to the reconstituted Board established under that Act.

**AUSTRALIAN WHEAT BOARD : FINANCIAL OPERATIONS
TO 30th NOVEMBER, 1949.**

(£.)

Particulars.	No. 7 Pool. (a)	No. 8 Pool. (a)	No. 9 Pool. (a)	No. 10 Pool. (a)	No. 11 and 11A Pools. (b)	No. 12 Pool. (b)
Paid to growers	23,795,653	8,843,681	44,274,573	43,683,708	126,316,756	62,898,000
Rail freight	1,881,808	758,504	2,400,831	1,795,753	5,120,000	4,590,000
Expenses	2,862,250	1,103,715	1,810,734	1,769,592	3,590,000	3,725,000
Total Payments	28,539,711	10,705,960	48,546,138	47,249,053	135,026,756	71,213,000
Value of sales delivered	26,651,903	8,842,982	47,785,890	45,309,645	(e) 153,026,688	791,353,987
Value of flour tax	1,887,808	1,862,971	760,248	1,939,408	..	..

(a) Complete. (b) Incomplete. (c) Includes £6,900,000 collected under Wheat Export Charges Act 1946 and subsequently distributed to growers, plus interest, £219,633. (d) Includes £4,329,780 collected under Wheat Export Charges Act 1946 and subsequently distributed to growers, plus interest, £99,224. (e) Includes £16,415,073 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948. (f) Includes £8,897,817 paid into Wheat Prices Stabilization Fund under Wheat Export Charges Act 1948.

NOTE.—Details of earlier pools will be found in Official Year Books No. 36, p. 798 and No. 37, p. 909.

(v) *Advances to Growers.* Full details of advances made to wheat growers in respect of No. 8 and preceding pools were given in Official Year Book No. 37 (pp. 910, 911) and in earlier issues of the Year Book.

The table below shows particulars of advances made in pools Nos. 11, 11A and 12 to 5th April, 1950. Pools No. 9 and 10 are complete while a small amount equivalent to a fraction of a penny per bushel remains to be distributed to growers in respect of No. 11 and No. 11A pools.

WHEAT POOLS Nos. 9 TO 12 : ADVANCES MADE TO GROWERS TO 5th APRIL, 1950.

Particulars.	Amount Paid (Trucks Terminal Port Basis).									
	1945-46 Harvest.		1946-47 Harvest.				No. 11 Pool.(a)		No. 11A Pool.(a,b)	
	No. 9 Pool.(a)		No. 10 Pool.(a)							
	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.	Per Bushel.	Total.
	s. d.	£'000.	s. d.	£'000.	s. d.	£'000.	s. d.	£'000.	s. d.	£'000.
Advances made to Growers—										
1st Payment—										
Bulk ..	4 1	26,044	4 1	20,654	4 6	46,608	4 6	1,672	5 0	45,327
Bagged ..	4 4		4 4		5 0		5 6		5 6	
2nd Payment—										
Bulk ..	1 0	6,196	1 6	7,423	2 0	19,789	2 0	670	1 6	13,117
Bagged ..	1 0		1 6		2 0		2 0		1 6	
3rd Payment—										
Bulk ..	0 6	3,098	1 0	4,948	2 0	19,789	2 0	670	1 0	5,165
Bagged ..	0 6		1 0		2 0		2 0		1 0	
4th Payment—										
Bulk ..	0 6	3,098	1 0	5,395	2 0	19,789	1 6	503	..	..
Bagged ..	0 6		1 3		2 0		1 6		..	
5th Payment—										
Bulk ..	0 1½	1,027	0 5½	2,268	1 6	14,840	1 0	335	..	..
Bagged ..	0 2½		0 5½		1 6		1 0		..	
6th Payment—										
Bulk ..	1 2½	7,260	1 2½	4,742	0 7	6,278	0 11½	362	..	..
Bagged ..	1 2½		1 2½		0 8½		1 1		..	
Total—										
Bulk ..	7 4½	46,723	9 0	45,430	12 7	127,098	11 11½	4,211	7 6	63,609
Bagged ..	7 8½		9 0		13 2½		12 7		8 0	

(a) Rail freight was deducted from 2nd payment. (b) This Pool refers to low grade wheat (under 54 lb. per bushel) which was segregated from other wheat received in No. 11 Pool. (c) Rail freight was deducted from 1st payment.

6. International Wheat Agreement.—Following a series of unsuccessful attempts extending over a period of years to secure an arrangement for the stabilization of international trade in wheat, an International Wheat Agreement was signed in Washington, D.C., United States of America, on 6th March, 1948 by 33 importing nations and the three exporting countries of Canada, United States of America and Australia. However, principally owing to the failure of the Government of the United States of America to ratify the Agreement within the prescribed time, it was allowed to lapse.

A further International Wheat Agreement was signed in Washington in March and April, 1949 by the representatives of 41 nations, comprising all the important wheat importing countries excluding Germany and Japan and the wheat exporting countries of Canada, United States of America, Australia, France and Uruguay. The 1949 Agreement is similar to that proposed in 1948, its stated objectives being "to assure supplies of wheat to importing countries and markets for wheat to exporting countries at equitable and stable prices".

The new Agreement covers a period of four years from 1st August, 1949 to 31st July, 1953, with provision for extension beyond that date, if desired. Under its terms, the five exporting countries who signed the agreement guarantee to sell 456.3 million bushels of wheat (including wheat flour as wheat) annually to the 37 importing countries specified, who in turn guarantee to purchase a similar quantity each year. Paraguay did not actually sign the agreement, reducing the number of importing countries who were signatories to 36, while Peru when signing specified a reduction in its guaranteed purchases shown in the original quotas. Details of the original quotas fixed in the Agreement are shown below. They do not include an amount of 70 million bushels which Germany agreed to purchase following its admission to the International Wheat Agreement in

1950. The source of this supply during 1950 was allocated as follows:—United States, 54 million bushels; Canada, 12 million bushels; Australia, 3 million bushels; and 1 million bushels to other exporters.

Japan's admission to the Agreement was rejected by the International Wheat Council. Purchases by this country will therefore be made outside the scope of the Agreement.

INTERNATIONAL WHEAT AGREEMENT: GUARANTEED ANNUAL SALES AND PURCHASES.

('000,000 Bushels.)

Exporting Country.	Guaranteed Annual Sales.(a)	Importing Country.	Guaranteed Annual Purchases.(a)
Canada	203.1	United Kingdom	117.1
United States of America	168.1	Italy	40.4
Australia	80.0	India	38.3
France	3.3	Netherlands (including In-	
Uruguay	1.8	donesia)	25.7
		Belgium	20.2
		Remaining 32 Importing	
		Countries	214.6
Total	456.3	Total	456.3

(a) Wheat and wheat flour as wheat.

The original quotas specified in the Agreement are subject to adjustment in the event of a country or countries failing to ratify, withdrawing from or being expelled from the Agreement or under such other special circumstances as are provided for in the Agreement. The quotas shown exclude wheat to be supplied to any Occupied Areas, for which the United States has accepted responsibility, this being outside the scope of the Agreement.

The Agreement fixes maximum and minimum prices between which transactions can be freely concluded and prices will move within the range prescribed in accordance with market conditions. But at the maximum price the exporting country must sell the quantity it has guaranteed to supply and at the minimum price the importing country must purchase the quantity it has guaranteed to buy.

The basic minimum and maximum prices fixed in the Agreement for No. 1 Manitoba Northern Wheat in bulk in store Fort William/Port Arthur in terms of Canadian currency at parity at 1st March, 1949 are shown in the following table. The approximate equivalent prices in terms of Australian currency at the exchange rates (average of buying and selling rates) operating prior to and from 19th September, 1949, the date on which Australian currency was devalued, are also shown.

INTERNATIONAL WHEAT AGREEMENT: MINIMUM AND MAXIMUM PRICES.

Crop Year August-July.	Minimum Price Per Bushel.			Maximum Price Per Bushel.		
	Canadian Currency.	Australian Currency.		Canadian Currency.	Australian Currency.	
		Prior to 19th September, 1949.	From 19th September, 1949.		Prior to 19th September, 1949.	From 19th September, 1949.
	\$	s. d.	s. d.	\$	s. d.	s. d.
1949-50 ..	1.50	9 4	13 5	1.80	11 2	16 1
1950-51 ..	1.40	8 8	12 6			
1951-52 ..	1.30	8 1	11 8			
1952-53 ..	1.20	7 6	10 9			

NOTE.—The £ (Sterling and Australian) was devalued and the price of gold in those currencies raised on 19th September, 1949.

The equivalent maximum price for Australian bulk f.a.q. wheat under the Agreement is—

- (a) The maximum price specified in the Agreement in Canadian currency converted into Australian currency at the prevailing rate of exchange (at present 16s. 1d. per bushel); or
- (b) The price f.o.b. Australia, equivalent to the c. and f. price in the country of destination of the maximum Canadian price specified above, computed by using currently prevailing transportation and exchange rates; whichever is the lower.

The minimum prices for f.a.q. Australian bulk wheat are the f.o.b. prices, Australia, equivalent to the c. and f. prices in the United Kingdom of the minimum Canadian prices specified above, computed by using current transportation and exchange rates.

Transactions between signatory exporting and importing countries at prices within the range will count towards fulfilment of the obligations assumed under the Agreement but any country is free to trade in wheat above the ceiling or below the floor price in respect of quantities additional to those covered by the Agreement.

A new International Wheat Council has been established to administer the Agreement. Its functions include adjustment to sale and purchase quotas as provided for in the Agreement and adjudication in the event of countries, either importers or exporters, finding difficulty in meeting their obligations under the Agreement.

Australia ratified the Agreement under the International Wheat Agreement Act 1949, which was assented to on 30th June, 1949. The Agreement came into operation as planned on 1st August, 1949.

7. **Wheat Farms.**—(i) *Number.* Particulars of the number of farms growing wheat for grain on 20 acres and upwards during each of the years 1939-40, 1940-41 and 1946-47 to 1948-49, compared with the average for the five years ended 1938-39, are shown in the following table. It should be noted that a farm worked on the share system or as a partnership is included as one holding only.

NUMBER OF FARMS GROWING WHEAT FOR GRAIN ON 20 ACRES AND UPWARDS.

State.	Average 1934-35 to 1938-39.	1939-40.	1940-41. (a)	1946-47.	1947-48.	1948-49.
New South Wales ..	15,657	16,175	15,831	15,971	16,797	15,674
Victoria ..	12,393	12,065	11,972	13,155	12,703	12,105
Queensland ..	2,403	2,542	2,169	2,006	2,921	3,804
South Australia ..	12,255	11,468	10,986	10,412	10,171	9,405
Western Australia ..	8,859	8,482	8,074	7,460	7,551	7,779
Tasmania ..	269	143	140	122	126	123
Total (b) ..	51,836	50,875	49,172	49,126	50,269	48,890

(a) Particulars for years 1941-42 to 1945-46 are not available.
Territory.

(b) Excludes Australian Capital

(ii) *Special Tabulations relating to Wheat Holdings.* With the co-operation of State Statisticians, a series of special tabulations relating to rural holdings was undertaken for all States for the year 1947-48. The tabulations, which covered, *inter alia*, a series of size classifications of wheat farms, have been published in detail in *Production Bulletin* No. 42—Part II., *Primary Industries and Total Recorded Production*. Particulars are shown below of the number of holdings growing wheat for grain, the area under wheat for grain and the production of wheat classified according to the size of the areas under wheat for grain for each State for the year 1947-48. A similar tabulation was made for the year 1935-39, a summary of the results being published in *Official Year Book* No. 33, pp. 374 to 377.

HOLDINGS GROWING WHEAT FOR GRAIN : CLASSIFICATION IN AREA SERIES, AUSTRALIA, 1947-48.

Area Series—Area under Wheat for Grain (Acres.)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total (a)
NUMBER OF HOLDINGS GROWING WHEAT FOR GRAIN.							
1- 19 ..	885	1,133	628	581	179	305	3,711
20- 49 ..	1,067	1,295	811	836	339	98	4,446
50- 99 ..	1,454	1,750	737	1,438	442	21	5,842
100- 199 ..	3,459	3,164	696	2,866	1,139	6	11,330
200- 299 ..	3,647	2,314	278	2,071	1,522	1	9,833
300- 399 ..	2,786	1,646	163	1,355	1,400	..	7,350
400- 499 ..	1,761	994	92	742	987	..	4,576
500- 599 ..	1,004	523	58	369	616	..	2,570
600- 699 ..	640	403	28	206	409	..	1,686
700- 799 ..	363	216	17	114	205	..	915
800- 899 ..	193	150	10	76	164	..	593
900- 999 ..	133	92	8	36	87	..	356
1,000-1,999 ..	264	149	20	59	207	..	699
2,000 and over ..	26	7	3	3	34	..	73
Total ..	17,682	13,836	3,549	10,752	7,730	431	53,980

AREA UNDER WHEAT FOR GRAIN (ACRES).

1- 19 ..	8,622	11,250	7,395	5,857	1,891	2,489	37,504
20- 49 ..	33,562	41,216	27,840	27,274	10,673	2,822	143,387
50- 99 ..	101,099	124,510	53,404	103,291	30,695	1,354	414,353
100- 199 ..	489,781	448,128	96,609	405,370	162,404	861	1,603,153
200- 299 ..	864,553	544,665	67,293	487,999	365,028	250	2,329,818
300- 399 ..	920,155	540,386	56,045	448,806	465,444	..	2,430,816
400- 499 ..	753,613	425,042	41,067	317,740	425,959	..	1,993,421
500- 599 ..	528,028	276,117	31,420	194,101	324,747	..	1,354,413
600- 699 ..	399,060	251,335	18,358	127,775	256,072	..	1,052,600
700- 799 ..	262,657	157,119	12,523	82,084	149,556	..	663,939
800- 899 ..	158,406	123,955	8,549	62,400	135,401	..	488,711
900- 999 ..	122,303	85,725	7,581	33,294	80,914	..	329,817
1,000-1,999 ..	324,510	184,429	25,774	69,532	250,339	..	854,584
2,000 and over ..	76,038	13,285	8,381	9,350	101,323	..	208,977
Total ..	5,043,017	3,227,162	462,239	2,374,873	2,760,446	7,776	13,875,513

PRODUCTION OF WHEAT (BUSHELS).

1- 19 ..	136,455	177,139	135,810	86,367	19,400	39,306	594,477
20- 49 ..	564,291	685,518	518,208	393,492	106,147	40,035	2,307,691
50- 99 ..	1,824,882	2,173,101	1,110,531	1,560,810	324,270	18,819	7,012,413
100- 199 ..	9,526,398	7,940,801	2,129,418	6,312,747	1,799,345	17,047	27,725,756
200- 299 ..	16,852,446	9,149,721	1,534,071	7,307,091	4,129,577	3,000	38,975,906
300- 399 ..	17,614,083	8,250,476	1,379,070	6,354,606	5,636,208	..	39,234,443
400- 499 ..	14,162,469	5,933,252	989,379	4,007,370	5,497,551	..	30,590,021
500- 599 ..	9,852,615	3,557,946	737,889	2,406,789	4,181,523	..	20,736,762
600- 699 ..	7,465,170	2,894,360	513,456	1,367,754	3,368,013	..	15,608,753
700- 799 ..	4,921,884	1,752,739	341,622	899,289	1,930,338	..	9,845,872
800- 899 ..	2,937,972	1,395,292	242,334	622,473	1,805,220	..	7,003,201
900- 999 ..	2,130,186	986,206	221,919	372,663	1,052,602	..	4,763,576
1,000-1,999 ..	5,979,423	1,914,153	672,096	766,983	3,187,100	..	12,519,755
* 2,000 and over ..	1,258,521	151,681	158,760	65,988	1,462,706	..	3,097,656
Total ..	195,226,795	106,962,385	10,684,563	32,524,422	34,500,000	118,207	220,016,372

(a) Excludes Northern Territory and Australian Capital Territory.

8. Area, Production and Average Yield.—(i) *Area.* Wheat is the principal crop raised in Australia, and its progress since 1860 has been almost continuous. Prominent features in its early development were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress but its subsequent recovery was

assisted by the invention of mechanical appliances, the use of superphosphate as an aid to production, and the introduction of new and more suitable varieties for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion. The most serious interruptions in more recent years were those occasioned by the two World Wars and the economic depression of the early thirties.

As previously mentioned, any variation in the acreage sown to this cereal materially affects the total area of crops. The area and yield of wheat for grain in each State are given below for the years 1943-44 to 1948-49 in comparison with the averages for the decennial periods ended 1938-39 and 1948-49:—

WHEAT FOR GRAIN: AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES.)								
Average, 1929-30 to 1938-39 ..	4,302	3,063	277	3,526	3,158	17	2	14,345
1943-44 ..	2,693	1,794	281	1,534	1,567	5	1	7,875
1944-45 ..	2,845	2,142	332	1,623	1,516	4	1	8,463
1945-46 ..	3,774	3,251	392	2,105	1,836	5	2	11,425
1946-47 ..	4,475	3,501	248	2,519	2,419	7	3	13,172
1947-48 ..	5,043	3,227	462	2,375	2,760	8	5	13,880
1948-49 ..	4,038	2,996	608	2,003	2,867	7	4	12,583
Average, 1939-40 to 1948-49 ..	3,871	2,731	363	2,191	2,298	6	2	11,462

PRODUCTION ('000 BUSHEL.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 ..	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1943-44 ..	47,500	19,733	5,084	20,691	16,550	122	39	109,719
1944-45 ..	17,134	3,497	6,931	9,244	15,929	93	2	52,880
1945-46 ..	62,520	29,634	8,188	21,034	20,929	67	38	142,410
1946-47 ..	15,682	48,971	705	27,906	23,800	139	59	117,262
1947-48 ..	95,227	46,962	10,685	32,524	34,500	118	100	220,111
1948-49 ..	64,704	49,064	14,317	26,136	36,250	156	76	190,703
Average, 1939-40 to 1948-49 ..	50,344	34,519	6,653	26,350	26,798	116	45	144,825

A graph showing the expansion of the area sown to wheat for grain in Australia since 1860 appears on page 963 while a graph showing the distribution of areas growing wheat for grain throughout Australia in 1947-48 is shown on pp. 965-6. Similar graphs showing the distribution of wheat areas in 1924-25 and 1938-39 appeared in Official Year Book No. 22, p. 695 and Official Year Book No. 34, p. 451, respectively.

(ii) *Production.* Apart from the variations in the area sown, the size of the wheat harvest in Australia is largely determined by the nature of the season and inconsistencies in this respect are reflected in the yearly production.

It should be noted, however, that with improved farming methods, which include the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, average yields per acre during four decades to 1940 have shown a continued improvement, and fluctuations in production have become less pronounced.

Australia's wheat production in 1947-48 was a record at 220.1 million bushels, representing an average yield of 15.86 bushels per acre. This was 75.3 million bushels more than the average for the decennium ended 1948-49 and 50.7 million bushels above the average for the ten years ended 1938-39. The record 1947-48 harvest was followed by exceptionally heavy crops of 190.7 million bushels in 1948-49 and 216.5 million bushels in 1949-50. The 1949-50 yield of 17.83 bushels per acre was a record.

(iii) *Decennial Averages, 1861-70 to 1940-49.* The following table shows the average area, production and yield per acre for decennial periods since 1861, together with the average wholesale price since 1871. Up to and including 1939 the price quoted represents the arithmetic mean of the annual averages at Melbourne (f.o.r. Williamstown), and may be accepted as fairly representative for Australia; from 1940 the price represents the average return to the grower for all wheat, bulk and bagged, f.o.r. ports basis.

WHEAT FOR GRAIN : AVERAGE AREA, PRODUCTION AND WHOLESALE PRICE, AUSTRALIA.

Decennium.	Area.	Production.	Yield per Acre.	Average Wholesale Price.
	'000 Acres.	'000 Bushels.	Bushels.	s. d.
1861-70	831	10,622	12.77	(a)
1871-80	1,646	17,711	10.76	5 1
1881-90	3,258	26,992	8.29	4 7
1891-1900 ..	4,087	29,934	7.32	3 8
1901-10	5,711	56,058	9.82	3 10
1911-20	8,928	95,480	10.69	5 0
1921-30	11,291	135,400	11.99	5 8
1931-40	14,176	177,758	12.54	3 4
1940-49	11,462	144,825	12.65	(b) 5 3 $\frac{3}{4}$

(a) Not available.

(b) Subject to revision. See letterpress above.

(iv) *Average Yield.* In the next table will be found the average yield of wheat per acre for specified periods :—

**WHEAT FOR GRAIN : YIELD PER ACRE.
(Bushels.)**

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39..	13.00	12.54	14.88	9.84	11.34	21.73	20.63	11.81
1943-44 ..	17.64	11.00	18.07	13.49	10.56	25.24	27.75	13.93
1944-45 ..	6.02	1.63	21.00	5.70	10.51	24.18	1.22	6.25
1945-46 ..	16.57	9.11	20.86	9.72	11.40	13.38	21.20	12.46
1946-47 ..	3.50	13.99	2.84	11.08	9.84	18.47	18.09	8.90
1947-48 ..	18.88	14.55	23.11	13.70	12.50	15.20	20.90	15.86
1948-49 ..	16.02	16.38	23.56	12.67	12.64	22.69	18.23	15.15
Average, 1939-40 to 1948-49..	13.01	12.64	18.31	12.03	11.66	18.76	18.67	12.64

Variation in the short-term average yield is chiefly due to the vagaries of the seasons. The best average yields for single seasons since 1901 were obtained in 1920-21, 16.08 bushels; in 1942-43, 16.78 bushels; and in 1949-50, 17.83 bushels.

The table in par. 8 (iii) above, which shows changes in the average yield per acre of wheat for decennial periods from 1861 to 1949 discounts seasonal fluctuations. This long-term comparison shows that the yield per acre of 12.77 bushels, obtained in the decennium 1861-70 from 831,000 acres of almost virgin soil in selected areas, was followed by a downward trend to 7.32 bushels per acre for the ten years 1891-1900. From this period onward, decennial yields per acre have improved, and for the decennium 1940-49 stood at 12.65 bushels. This improvement was associated with advances in farming practices such as (i) development of superior wheat varieties; (ii) judicious use of fertilizers; (iii) education in soil conservation and crop rotation; and (iv) increased use of machinery on wheat farms.

(v) *Relation to Population.* The main wheat-producing States of Australia are New South Wales, Victoria, South Australia and Western Australia. Queensland production normally approaches local demands, but Tasmania imports from the mainland to satisfy its needs, though partly in exchange it ships flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to three-quarters of the crop is exported overseas.

9. *Varieties of Wheat Sown.*—(i) *General.* The breeding of wheat suitable to local conditions has long been established in Australia. Farrar (1845-1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have since followed him have proved of immense benefit to the wheat industry of Australia. Their efforts have resulted in better average yields, a greater uniformity of sample, with which has accrued certain marketing advantages, as well as an improvement in the quality of wheat grown. More than 1,000 different varieties of Australian wheats have been catalogued by the Commonwealth Scientific and Industrial Research Organization, but the number of the principal varieties grown during each season is restricted to about 40.

(ii) *States, 1948.* Particulars of the varieties of wheat sown and the areas thereunder were collected annually up to 1940. The collection was then suspended but was resumed in 1946-47. Details of the nine principal varieties sown in 1948 in the four main producing States and the percentage each bears to the total area sown are given in the following table.

WHEAT : PRINCIPAL VARIETIES SOWN, 1948.

New South Wales.		Victoria.		South Australia.		Western Australia.	
Variety.	Per- cent- age.	Variety.	Per- cent- age.	Variety.	Per- cent- age.	Variety.	Per- cent- age.
	%		%		%		%
Bencubbin ..	34.79	Quadrat ..	47.20	Bencubbin ..	19.31	Bencubbin ..	30.44
Gabo ..	13.00	Insignia ..	11.77	Warigo ..	15.03	Bungulla ..	25.51
Ford ..	7.12	Bencubbin ..	7.27	Waratah ..	6.75	Glucub ..	17.05
Charter ..	5.20	Magnet ..	7.23	Reldep ..	5.42	Rance ..	3.72
Bordan ..	3.88	Glurka ..	7.10	Gluyas ..	4.09	Kondut ..	3.68
Yalta ..	3.86	Pindar ..	5.67	Quadrat ..	4.60	Koorda ..	2.85
Quadrat ..	2.72	Pinnacle ..	4.82	Marathon ..	4.28	Merredin ..	2.39
Koala ..	2.60	Rance ..	2.46	Sword ..	4.02	Eureka ..	1.45
Dundee ..	2.49	Regalia ..	1.75	Rance ..	3.07	Waratah ..	1.40
All other (a) ..	24.25	All other (a) ..	4.73	All other (a) ..	32.83	All other ..	11.51
Total ..	100.00	Total ..	100.00	Total ..	100.00	Total ..	100.00

(a) Includes not stated.

Continued progress in the breeding of new and better wheats has resulted in many changes in the varieties sown. Bencubbin, formerly a variety relatively unimportant outside Western Australia, was the leading wheat sown in 1948 in New South Wales, South Australia and Western Australia, although its popularity has declined to some extent since 1946. In Victoria, Quadrat is the principal variety sown and in 1948 it accounted for 47.2 per cent. of the total State area compared with 26.9 per cent. in 1946. The varieties which were second in importance in the respective States in 1948 were Gabo in New South Wales, Insignia in Victoria, Warigo in South Australia and Bungulla in Western Australia. The first three varieties occupied very minor places in 1946.

10. **F.A.Q. Standard of Wheat.**—The Chambers of Commerce in each of the four main wheat States each year determine the “f.a.q.” standard for the State. “F.a.q.” means “fair average quality”, and the standard is used as the basis for sales of the season’s crop. It represents the average quality for the season, and this average varies from year to year, and from State to State. “F.a.q.” is an Australian term, and the method differs from that of other countries which sell according to sample, or (as in Canada) according to grades which are fixed, and do not vary from year to year.

Samples of wheat are obtained by the Chambers of Commerce from the different wheat districts, and are mixed to give a representative sample of the whole crop. From this representative sample the f.a.q. weight is determined.

The following table sets out the f.a.q. weight of a bushel of wheat in each of the four main wheat-producing States from 1944-45 to 1948-49.

F.A.Q. STANDARD WEIGHT OF A BUSHEL OF WHEAT.

(lb.)

Year.				New South Wales.	Victoria.	South Australia.	Western Australia.
1944-45	..	..	..	63	63½	63	63
1945-46	..	..	..	63½	62½	61½	63½
1946-47	..	..	..	62½	63½	61½	63
1947-48	..	..	..	60½	60½	61	64½
1948-49	..	..	..	63½	63	63½	63½

11. **Price of Wheat.**—(i) *Home Consumption.* The price charged by the Australian Wheat Board for wheat sold to millers for gristing into flour for consumption in Australia and for wheat sold as stock feed is shown in the table below for the years indicated.

AUSTRALIAN WHEAT BOARD'S PRICE FOR WHEAT FOR HOME CONSUMPTION : AUSTRALIA.

(s. d. per Bushel, Bulk Basis).

Particulars.		1939.	1944.	1945.	1946.	1947.	1948.	1949.
For Flour	..	(a)	(b) 3 11	(b) 3 11	(b) 3 11	(b) 3 11	6 3	6 8
For Stock Feed	..	(a)	(c) 3 4	(c) 3 4	(c) 4 3	4 11	6 3	6 8

(a) Not available.

(b) Excluding 1s. per bushel recovered from Flour Tax and included in advances to growers.

(c) Disregarding subsidies paid by the Commonwealth Government which were included in advances to growers. These approximated 8d. per bushel.

(ii) *Export Wheat Prices.* (a) *Australian Wheat Board's Basic Selling Price.* Details of the export wheat prices are given in the table below for the years stated. Owing to changes which have occurred in the manner of selling export wheat, it is not possible to quote prices on a strictly comparable basis throughout the period covered by the table. The prices for 1939 represent the “weighted average shippers’ limits f.o.r. ports for growers’ bagged and bulk lots, Sydney, Melbourne and Adelaide.” Following the

acquisition of the 1939-40 and later wheat crops by the Commonwealth Government, it was no longer possible to record prices on this basis. The prices shown below for the years 1944 to 1949 are the basic export selling prices of the Australian Wheat Board (averages for bulk and bagged wheat, f.o.r. ports basis).

The quotations are more or less nominal. The market has been "broad" and wheat has been sold at times above and below this basic price, depending upon conditions of sale. Much of the wheat is sold at prices fixed under contract for delivery over lengthy periods. The prices shown below do not, therefore, necessarily represent the prices actually received for wheat currently being shipped. This matter is referred to in the succeeding paragraph.

AUSTRALIAN WHEAT BOARD'S SELLING PRICE FOR WHEAT FOR EXPORT: AUSTRALIA.

(s. d.)

Particulars.	1939.(a)	1944.	1945.	1946.	1947.	1948.	1949.
Average Price Per Bushel for Bulk and Bagged Lots f.o.r., ports basis	2 4	5 4	(b)	10 11	16 8	18 8	(c) 15 1

(a) Average of shippers' limits for growers' bagged and bulk lots, Sydney, Melbourne and Adelaide for eight months ended August, 1939. (b) Not available. The export price of wheat for January and February, 1945 averaged 6s. 5d. per bushel and 9s. 8d. for December. There were no sales for the other months of the year. (c) Average for seven months ended July, 1949. On 1st August, 1949, the price of wheat was fixed in accordance with the terms of the International Wheat Agreement.

(b) *Average Bushel Value of Wheat Actually Exported.* The following table shows for the years indicated the wheat price used in compiling the Export Price Index. The figure for 1939 represents the weighted average of shippers' limits f.o.r. ports for growers' bagged and bulk lots, Sydney, Melbourne and Adelaide. For 1946 and succeeding years the prices are based on the average actual realizations for current shipments, as it was impossible to determine representative average prices at which current sales were being effected because a very large proportion of Australia's exportable wheat was sold forward on long-term contracts at widely differing prices outside the basic price shown in the table above. The prices shown in the following table, therefore, give the average realizations f.o.b. for wheat shipped during the years shown.

AVERAGE VALUE OF WHEAT ACTUALLY EXPORTED : AUSTRALIA.

(s. d.)

Particulars.	1939.	1945.	1946.	1947.	1948.	1949.
Average actual realizations per bushel f.o.b. basis ..	2 4	(a)	10 1	14 5	18 0	15 1

(a) Not available.

(iii) *Payments to Growers.* Reference is made in par. 5 (v) of this section to the amounts paid to growers from the wheat pools.

(iv) *Prices under International Wheat Agreement.* Details of the minimum and maximum prices fixed under the terms of this Agreement and adjustments made following the devaluation of Australian currency in terms of gold are given in par. 6 of this section.

12. **Value of the Wheat Crop.**—The estimated value of the wheat crop in each State and in Australia during the seasons 1946-47 and 1947-48 is shown below. The values are on a gross basis at the principal market in each State and are based upon payments made to producers. Pending the finalizing of the accounts of the Australian Wheat Board these values are subject to revision.

WHEAT FOR GRAIN : VALUE OF CROP(a), 1946-47 and 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1946-47.								
Aggregate value £	8,616,370	19,790,625	178,656	12,651,739	10,890,128	38,290	23,078	52,188,886
Value per acre ..	£1/18/6	£5/13/1	£0/14/5	£5/0/5	£4/9/9	£5/1/7	£7/1/8	£3/19/2
1947-48.								
Aggregate value £	61,691,090	32,130,370	6,269,314	22,772,336	20,955,543	39,890	68,608	143,927,151
Value per acre ..	£12/4/8	£9/19/1	£13/11/3	£9/11/10	£7/11/10	£5/2/7	£14/6/10	£10/7/5

(a) Gross value of total crop, including drought relief and also seed used on farm, but excluding value of straw.

13. **Production and Disposal of Wheat in Australia.**—In the following table details are given of the production of wheat and its disposal during each of the cereal years ended 30th November, 1945 to 1949 in comparison with the average for the three years ended November, 1937 to 1939. The particulars respecting local consumption refer to sales actually executed by the Australian Wheat Board, whilst those respecting exports represent actual shipments. (For particulars of production and exports from 1860 *see* graph, p. 964).

WHEAT : PRODUCTION AND DISPOSAL, AUSTRALIA.

('000,000 Bushels.)

Particulars.	Average, Three Years ended 30th Nov- ember, 1939.	Year ended 30th November—				
		1945.	1946.	1947.	1948.	1949.
Opening stocks (including flour as wheat)	10.4	77.9	11.5	20.2	13.5	26.4
Production	164.7	52.9	142.4	117.3	220.1	190.7
Total Available Supplies ..	175.1	130.8	153.9	137.5	233.6	217.1
Exports—						
Wheat	75.0	6.1	19.4	12.0	87.0	82.4
Flour as wheat	31.8	12.9	37.7	34.0	44.6	37.1
Local Consumption—						
Flour as wheat	30.9	33.1	32.2	33.5	33.6	34.5
Stock feed	8.2	44.9	24.4	22.2	20.7	22.6
Seed	14.6	12.0	13.2	13.8	12.5	(a)12.5
Breakfast foods and other uses ..	(b)	3.1	3.0	4.2	4.2	4.2
Balance retained on farm (excluding seed)	(c)	7.2	3.8	4.3	4.6	(a) 4.7
Closing stocks (including flour as wheat)	14.6	11.5	20.2	13.5	26.4	(a)19.1
Total Disposals	175.1	130.8	153.9	137.5	233.6	217.1

(a) Subject to revision. (b) Included with flour (local consumption.) (c) Included with stock feed.

14. **Consumption of Wheat in Australia.**—Details of the average Australian consumption of wheat as flour, for stock feeding and for seed are shown in the following table in total and per head of population for the periods of three years ended November, 1939 and 1949.

CONSUMPTION OF WHEAT : AUSTRALIA.

Particulars.	Average, 1936-37 to 1938-39.		Average, 1946-47 to 1948-49.	
	Total.	Per Head of Population.	Total.	Per Head of Population.
Flour—As flour	Tons.(a) 643,750	lb. 187.4	Tons.(a) 706,250	lb. 184.6
Flour—Equivalent as Wheat (b) ..	mill. bush. 30.9	bush. 4.50	mill. bush. 33.9	bush. 4.43
Wheat for—				
Stock Feed	8.2	1.19	21.8	2.85
Seed	14.6	2.13	12.9	1.69
Total as Wheat	53.7	7.82	68.6	8.97

(a) Ton = 2,000 lb.

(b) One ton (2,000 lb.) of flour is taken to be equivalent to 48 bushels of wheat.

15. **Exports of Wheat and Flour.**—(i) *Quantities.* The following table shows particulars of the exports of wheat and flour and total of both in terms of wheat for each of the years 1943-44 to 1947-48 compared with the average for the five years ended 1938-39. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 48 bushels of grain. Wheat and flour have been imported to tide over lean seasons on only two occasions since 1900; in 1902-3 the wheat harvest was as low as 12,378,000 bushels, and wheat and flour representing 12,468,000 bushels of wheat were imported, whilst an equivalent of 7,279,000 bushels was imported in 1914-15 to supplement the yield of 25 million bushels produced in that season. During the five years ended 1947-48 exports in terms of wheat averaged 61,076,000 bushels compared with the average of 107,533,000 bushels for the five years ended 1938-39.

WHEAT AND FLOUR : EXPORTS FROM AUSTRALIA.

Year.	Quantity.				Value (£A'000. f.o.b.)		
	Wheat.	Flour.		Total as Wheat.	Wheat.	Flour.	Total.
		As Flour.	As Wheat. (a)				
	'000 bush.	Tons. (2,000lb.)	'000 bush.	'000 bush.			
Average, 1934-35							
1938-39 ..	76,473	647,073	31,060	107,533	14,813	5,058	19,871
1943-44 ..	33,658	590,544	28,346	62,005	8,264	6,699	14,963
1944-45 ..	32,391	559,749	26,868	59,259	9,752	6,732	16,484
1945-46 ..	12,484	518,876	24,906	37,390	6,223	11,337	17,560
1946-47 ..	12,176	765,098	36,725	48,900	6,338	22,535	28,873
1947-48 ..	60,174	784,370	37,650	97,824	52,813	31,823	84,636

(a) One ton (2,000 lb.) of flour is taken to be equivalent to 48 bushels of wheat.

(ii) *Destination.* (a) *Wheat.* The following table shows the exports of wheat to various countries for each of the five years ended 1947-48, and the average for the five years ended 1938-39.

WHEAT : EXPORTS FROM AUSTRALIA.

('000 Bushels).

Country to which Exported.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
United Kingdom	45,195	321	..	..	..	17,226
Ceylon	134	2,435	602	659	..	..
Eire	3,276	..	..	..	..	2,402
India	1,662	8,404	15,626	9,123	6,692	21,336
New Zealand	1,537	2,834	2,486	944	4,332	4,401
Rhodesia, Southern	1	81	342	331	868	741
Union of South Africa	602	813	276	286	38	5
Other British Countries	574	4,145	632	3	237	1,757
Belgium	756	..	..	..	..	341
China	6,151	..	..	639	..	11
Egypt	503	3,705	..	..	1	509
France	939	..	..	..	..	3,516
French Dependencies	1	667	44	15	7	2,317
Italy	3,152	5,636	5,600	..	..	665
Iraq .. ..	..	1,899	724	..	..	1,465
Other Foreign Countries	11,990a	2,718	6,059	484	1	3,482b
Total	76,473	33,658	32,391	12,484	12,176	60,174

(a) Includes Japan, 6,471.

(b) Includes Norway, 687; Sweden, 556; Switzerland, 682.

(b) *Flour.* The following table shows the exports of flour to various countries for each of the five years ended 1947-48, and the average for the five years ended 1938-39 :—

FLOUR : EXPORTS FROM AUSTRALIA.

(Tons of 2,000 lb.)

Country to which Exported.	Average 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
United Kingdom	142,912	..	32,995	3,267	99,954	56,366
Ceylon	16,915	315,505	229,996	152,040	171,191	190,104
Hong Kong	44,966	..	..	28,231	33,050	21,988
India	2,732	28,698	84,105	95,115	49,581	58,922
Malaya (British)	63,309	..	..	117,749	194,036	136,255
Mauritius	54,960	40,709	42,470	22,969	42,243	46,367
New Zealand	3,187	137	3,570	16,183	17,047	22
Union of South Africa	306	258	1,586	2,556	9,024	448
Other British Countries	6,190	117,362	35,867	49,823	33,300	124,445a
China	50,460	..	..	..	39,192	4,304
Egypt	24,284	56,880	84,807	149	37,545	85,841
French Dependencies	13,743	17,189	17,053	15,286	28,463	35,035
Other Foreign Countries	223,109	13,806	27,300	15,508	10,472	24,273
Total	647,073	590,544	559,749	518,876	765,098	784,370

(a) Includes Palestine, 57,620 tons.

16. **Stocks of Wheat and Flour.**—Stocks of wheat and flour held by each State at 30th November in each year 1939 and 1944 to 1948, and the total in terms of wheat, are shown in the following table. The source of these data is the Australian Wheat Board, but, in order to maintain comparability with pre-war figures, adjustments have been made where possible to allow for stocks estimated to be held by merchants, bakers and farmers.

WHEAT AND FLOUR : STOCKS AT 30th NOVEMBER. (a)

30th November.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
WHEAT (BUSHELS).							
1939	5,059,320	3,435,783	304,199	5,139,508	2,114,766	162,251	16,215,827
1944	17,662,000	18,274,000	278,000	19,858,000	17,297,000	378,000	73,747,000
1945	695,000	1,848,000	175,000	900,000	2,191,000	238,000	6,047,000
1946	10,510,000	1,994,000	751,000	940,000	884,000	62,000	15,141,000
1947	1,571,000	3,735,000	372,000	1,715,000	766,000	217,000	8,376,000
1948	13,102,000	3,227,000	1,273,000	3,890,000	583,000	386,000	22,461,000

FLOUR (TONS OF 2,000 LB.).

30th November.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939	34,875	27,350	5,292	21,479	8,592	1,695	99,283
1944	26,747	22,614	3,578	11,300	18,418	385	86,042
1945	28,895	25,664	3,674	42,000	12,419	987	113,639
1946	28,000	35,997	5,521	20,000	15,287	726	105,531
1947	30,244	47,242	4,001	9,400	15,132	1,089	107,108
1948	20,505	24,609	5,637	17,000	15,163	117	83,031

TOTAL IN TERMS OF WHEAT (BUSHELS).

30th November.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939	6,733,320	4,748,584	558,215	6,170,500	2,527,182	243,611	20,981,412
1944	19,089,856	19,359,472	449,744	20,400,400	18,181,064	396,480	77,877,016
1945	2,081,960	3,079,872	351,352	2,916,000	2,787,112	285,376	11,501,672
1946	11,854,000	3,721,856	1,016,008	1,900,000	1,617,776	96,848	20,206,488
1947	3,022,712	6,002,616	564,048	2,166,200	1,492,336	269,272	13,517,184
1948	14,086,240	4,408,232	1,543,576	4,706,000	1,310,824	391,616	26,446,488

(a) One ton of flour treated is equivalent to 48 bushels of wheat.

17. **Flour Milling.**—Particulars of the grain-milling industry are given in some detail in Chapter XXIV. "Manufacturing Industry". The following table summarizes the operations of flour mills in Australia for the years 1938-39 and 1943-44 to 1947-48.

OPERATIONS OF FLOUR MILLS : AUSTRALIA.

Particulars.	Unit.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of mills ..	No.	172	167	168	170	172	167
No. of persons employed ..	"	3,783	3,993	4,175	4,099	4,442	4,623
Wheat milled ..	'000 bus.	66,999	69,559	75,210	63,416	73,780	66,842
Output of Flour(a) ..	" tons	1,373	1,358	1,413	1,219	1,490	1,598
" " Bran ..	" "	289	278	280	238	288	308
" " Pollard ..	" "	284	280	286	256	316	326

(a) Includes wheatmeal for baking.

18. **Voluntary Wheat Pools.**—Details of voluntary wheat pools operating in Australia are given in issues of the Official Year Book prior to No. 33, 1940. These pools ceased to function when the Australian Wheat Board was created in September, 1939.

19. **World Area and Production of Wheat.**—The details in the following table of the world area and production of wheat by countries and continents have been compiled from official sources so far as they are available, but more particularly from the records published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Relations. The harvests shown for countries in the Northern Hemisphere are those garnered during the period March to October whilst those for the Southern Hemisphere cover the period November to February following. Figures in parentheses are unofficial estimates.

WHEAT : AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES.

Continent and Country.	Area.(a)			Production.			Yield per acre.		
	Average—		1948.	Average—		1948.	Average—		1948.
	1930-34.	1935-39.		1930-34.	1935-39.		1930-1934.	1935-1939.	
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
North America—									
Canada ..	25,682	25,595	24,106	348,560	312,399	393,302	13.6	12.2	16.3
Mexico ..	1,237	1,244	1,426	14,364	14,282	17,525	11.6	11.5	12.3
United States	54,193	57,293	71,904	732,527	758,623	1,288,288	13.5	13.2	17.9
Total (b) ..	81,150	84,150	97,608	1,096,000	1,086,000	1,701,062	..	..	..
Europe—									
Austria ..	535	(c) 616	502	12,626	c 15,117	(11,500)	23.6	c24.5	22.9
Belgium ..	384	402	353	14,726	16,150	(12,565)	38.3	40.2	35.6
Bulgaria ..	3,078	3,080	(d)	52,864	64,228	(d)	17.2	20.9	(d)
Czechoslovakia	2,129	(c) 2,220	2,108	53,697	c 59,090	46,733	25.2	c26.6	22.2
Denmark ..	259	316	171	11,131	14,358	8,818	43.0	45.4	51.6
Eire ..	43	225	516	1,698	7,689	12,345	39.5	34.2	23.9
France ..	13,280	(c) 12,724	10,362	305,318	c 292,568	272,574	23.0	c23.0	26.3
Germany ..	5,310	(c) 5,074	(3,610)	170,212	c 176,654	(112,057)	32.1	c34.8	31.0
Greece ..	1,612	2,150	2,093	18,414	30,205	28,290	11.4	14.0	13.5
Hungary ..	3,943	4,091	3,306	76,506	c 91,210	58,453	19.4	c22.3	17.7
Italy ..	12,089	12,635	11,523	252,604	279,519	227,384	20.9	22.1	19.7
Netherlands ..	267	338	245	11,802	15,209	11,132	44.2	45.0	45.4
Poland ..	4,280	4,303	2,842	74,267	77,245	43,721	17.4	18.0	15.4
Portugal ..	1,321	1,227	1,673	18,359	16,066	10,361	14.0	13.1	6.2
Rumania ..	7,703	9,053	(d)	103,447	140,816	(d)	13.4	15.6	(d)
Spain ..	11,236	10,220	9,637	158,081	c 113,905	119,993	14.1	c11.1	12.5
Sweden ..	607	740	781	23,214	26,351	25,314	33.3	35.6	32.4
United Kingdom ..	1,522	1,843	2,278	51,176	62,361	85,163	33.6	33.8	37.4
Yugoslavia ..	5,098	5,349	(d)	79,494	96,750	(d)	15.6	18.1	(d)
Total (b)	76,033	78,313	67,955	1,516,000	1,632,000	1,348,358	..	..	..
U.S.S.R. (b) ..	85,798	98,764	(d)	e 860,448	1,050,000	(d)	10.0	10.6	(d)
Africa—									
Algeria ..	3,893	4,184	(3,707)	32,571	35,201	(45,007)	8.4	8.4	12.1
Egypt ..	1,560	1,464	1,574	43,128	45,848	39,679	27.6	31.3	25.2
French Morocco	2,887	3,254	2,595	29,509	23,198	(22,999)	10.2	7.1	8.9
Tunisia ..	1,995	1,901	(2,044)	12,956	14,905	11,022	6.5	7.9	5.4
Union of South Africa (f) ..	1,516	1,926	2,701	12,301	16,259	18,848	8.1	8.4	7.0
Total (b)	12,630	13,720	13,591	135,000	142,000	154,308	..	..	..

See footnotes on next page.

WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES—*continued*.

Continent and Country.	Area.(a)			Production.			Yield per acre.		
	Average—		1948.	Average—		1948.	Average—		1948.
	1930-34.	1935-39.		1930-34.	1935-39.		1930-1934.	1935-1939.	
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
Asia—									
China ..	(c) 49,106	(c) 48,120	52,820	c 820,624	c 175,536	939,883	c 16.7	c 14.9	17.8
Korea ..	809	832	269	9,048	10,240	2,792	11.2	12.3	10.4
India ..	33,340	34,492	20,206	355,593	370,660	199,572	10.7	10.7	9.9
Japan ..	1,356	1,738	1,582	36,806	50,133	34,462	27.1	28.8	21.8
Manchuria ..	3,361	2,903	(d)	40,770	35,200	(d)	12.4	12.1	(d)
Syria and Lebanon ..	1,245	1,363	2,397	14,138	19,185	22,644	11.8	14.3	9.2
Turkey ..	7,023	8,952	10,949	94,796	135,690	180,834	13.5	15.2	16.5
Total(b)	102,300	105,900	108,234	1,456,000	1,442,000	1,601,864	..	..	..
South America—									
Argentina ..	17,709	15,834	(d)	243,932	221,769	(157,982)	13.8	14.0	..
Chile ..	1,763	1,963	2,150	27,355	35,562	(34,903)	15.5	16.1	16.2
Uruguay ..	1,055	1,210	1,263	9,876	13,256	(14,329)	9.4	11.0	11.3
Total (b) ..	21,800	20,500	17,051	295,000	280,000	224,114	..	..	..
Oceania—									
Australia ..	15,223	12,980	12,971	185,773	154,325	189,820	12.2	11.9	14.6
New Zealand	266	221	131	8,037	7,129	4,188	30.2	32.3	32.0
Total ..	15,489	13,201	13,102	193,810	161,454	194,008	..	..	..
World Total(b)	395,213	414,703	401,554	5,553,000	5,810,000	6,113,536	..	..	..
Totals—									
Northern Hemisphere(b)	356,507	378,866	368,700	5,051,164	5,351,186	5,676,566	14.2	14.1	15.4
Southern Hemisphere(b)	38,706	35,837	32,854	501,836	458,814	436,970	13.0	12.8	10.3
World Total(b)	395,213	414,703	401,554	5,553,000	5,810,000	6,113,536	..	..	..

(a) The figures of areas are, as far as possible, those of areas harvested. (b) Estimated total including the area and production of countries whose particulars are not shown separately. (c) Average of less than five years. (d) Not available. (e) Production estimates for the U.S.S.R. for the years 1933 and 1934 have been reduced 15 per cent. to take account of heavy harvesting losses. (f) Excludes native cultivation.

20. Exports—Principal Countries.—The following table shows the net quantities of wheat exported from the chief exporting countries for the period 1934-38 and the years 1946-47 and 1947-48 according to statistics recently published by the Food and Agriculture Organization. In the years before the 1914-18 War the U.S.S.R. (Russia) was the outstanding contributor to the world's supply of wheat, followed by the United States of America. Owing to increased demands within their own borders, however, the net exports from U.S.S.R. have since become relatively unimportant, while those from the United States of America declined considerably during the period between the 1914-18 and 1939-45 Wars. Since 1945, however, wheat production in the United States of America has risen to record levels and net exports from that country have greatly increased and in 1947-48 represented more than half the world total. Canada is now the second largest wheat exporter, followed by Argentina and Australia.

While Australia's production of wheat ranges between 2 and 4 per cent. of the world's total, its exports represent up to 20 per cent. of the quantities shipped. Australia's relative share in world wheat exports in 1947-48 was however only about half that for the five years 1934-38.

WHEAT (a) : NET EXPORTS, PRINCIPAL COUNTRIES.(b)

Exporting Country.	Average, 1934-38.		1946-47.		1947-48.	
	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.
Canada	175,403	32.74	228,719	30.15	205,052	22.12
Argentina	122,739	22.91	59,863	7.89	101,910	11.00
Australia	102,406	19.11	48,900	6.45	98,222	10.60
U.S.S.R. (Russia) ..	24,363	4.55	5,749	0.76	35,530	3.83
United States of America ..	22,547	4.21	405,637	53.48	484,862	52.32
All Other	88,333	16.48	9,630	1.27	1,243	0.13
Total	535,791	100.00	758,498	100.00	926,819	100.00
World Production ('000 bush.)	6,058		5,584		5,614	
Percentage of Australia's net Exports to Total net Exports	19.11		6.45		10.60	
Percentage of Australian Production to World Production	2.55		2.10		3.92	

(a) Includes flour expressed in terms of wheat.

(b) In some instances the average for 1934-38 is not strictly comparable with the later years shown, owing to changes of frontiers.

21. Imports—Principal Countries.—The net quantities of wheat and flour (expressed in terms of wheat) imported into the principal countries for the periods indicated are shown in the following table:—

WHEAT (a) : NET IMPORTS, PRINCIPAL COUNTRIES.(b)

Importing Country.	Average, 1934-38.		1946-47.		1947-48.	
	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.	'000 Bushels.	Per cent.
United Kingdom	201,098	38.95	197,562	26.40	199,651	21.41
Belgium(c)	39,262	7.61	24,404	3.26	23,715	2.54
Brazil	36,373	7.05	35,305	4.72	22,157	2.38
China (d)	27,932	5.41	14,470	1.93	4,140	0.44
Netherlands	21,571	4.18	25,464	3.40	27,597	2.96
Germany	21,545	4.17	83,049	11.10	136,403	14.63
Italy	18,076	3.50	46,759	6.25	81,718	8.76
Switzerland	16,915	3.28	9,376	1.25	14,639	1.57
Greece(f)	16,422	3.18	11,979	1.60	24,219	2.60
Austria	8,921	1.73	11,859	1.59	22,295	2.39
France	5,424	1.05	16,795	2.24	53,236	5.71
Ceylon	924	0.18	14,402	1.92	10,767	1.15
Mexico	698	0.13	13,922	1.86	10,876	1.17
Spain	(g)	(g)	10,655	1.42	16,353	1.75
Japan and Korea	(g)	(g)	36,167	4.83	45,598	4.89
India and Pakistan	(g)	(g)	37,613	5.03	48,161	5.17
All Other	101,087	19.58	158,696	21.20	190,993	20.48
Total	516,248	100.00	748,477	100.00	932,518	100.00

(a) Includes flour expressed in terms of wheat.

(b) In some instances the average 1934-38 is not strictly comparable with the later years shown, owing to changes of frontiers.

(c) Includes Luxembourg.

(d) Includes Manchurian ports.

(e) Includes Trieste.

(f) Includes Aegean Islands.

(g) Net exports.

§ 5. Oats.

1. *Area, Production and Average Yield.*—(i) *Area and Production.* Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1947-48 accounted for 62.32 per cent., oats grown for grain represented only 9.45 per cent. of the area of crops. The acreage and production of oats for the years 1943-44 to 1947-48 and the averages for the ten year periods ended 1938-39 and 1947-48 are shown in the following table:—

OATS FOR GRAIN : AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
AREA ('000 ACRES).								
Average, 1929-30 to 1938-39 ..	229	478	5	282	369	30	..	1,393
1943-44.. ..	374	426	22	225	358	10	..	1,415
1944-45.. ..	544	722	17	334	402	15	..	2,034
1945-46.. ..	617	511	40	370	306	14	I	1,940
1946-47.. ..	558	454	15	252	425	23	I	1,728
1947-48.. ..	609	650	25	309	495	17	..	2,105
Average, 1938-39 to 1947-48 ..	448	527	18	313	414	18	..	1,738

PRODUCTION ('000 BUSHELS).

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
PRODUCTION ('000 BUSHELS).								
Average, 1929-30 to 1938-39 ..	3,578	5,750	68	2,233	3,973	831	4	16,437
1943-44.. ..	7,051	3,705	389	2,294	3,964	299	10	17,712
1944-45.. ..	1,757	1,335	206	1,316	3,845	420	1	8,970
1945-46.. ..	9,997	7,402	830	3,178	4,081	281	5	25,774
1946-47.. ..	2,046	6,402	79	2,780	3,656	595	8	15,566
1947-48.. ..	13,674	15,381	474	5,394	5,411	300	3	40,697
Average, 1938-39 to 1947-48 ..	5,971	6,283	278	3,042	4,313	468	6	20,361

The oat crop showed considerable variation during the past decennium, ranging from 8,970,000 bushels in 1944-45 to a record yield of 40,697,000 bushels in 1947-48, with an average for the period of 20,360,819 bushels. The 1947-48 oat crop exceeded the previous record in 1945-46 by 14,923,000 bushels or 57.9 per cent.

The principal oat-growing States are New South Wales and Victoria, which produce, on the average, more than half the total quantity grown in Australia. Western Australia and South Australia also produce considerable quantities, but in Queensland and Tasmania the output is small.

Oats are mainly used in Australia as feed grain. During the ten years ended 1947-48 the average annual quantity consumed by stock was about 14 million bushels, leaving a balance of about 3.5 million bushels for seed purposes, about 2 million bushels for oat-meal and a small quantity for the production of spirits and for malting. Normally the exports of oats are small but a large surplus was available from the heavy 1947-48 crop and shipments of over 6,800,000 bushels were made in that year.

(ii) *Average Yield.* The average yield per acre of oats varies considerably in the different States, being highest in Tasmania and lowest in South Australia. Averages for each of the seasons 1943-44 to 1947-48 and for the ten-year periods ended 1938-39 and 1947-48 are given in the following table :—

OATS FOR GRAIN : AVERAGE YIELD PER ACRE.

(Bushels.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39 ..	15.66	12.03	12.77	7.91	10.77	28.15	22.35	11.80
1943-44 ..	18.84	8.69	17.60	10.22	11.07	30.69	24.67	12.52
1944-45 ..	3.23	1.85	17.64	3.94	9.57	28.41	2.65	4.41
1945-46 ..	16.20	14.47	20.75	8.60	10.30	20.15	9.21	13.22
1946-47 ..	3.67	14.10	5.09	11.02	8.60	26.24	12.81	9.01
1947-48 ..	22.45	23.66	18.97	17.47	10.94	21.09	6.86	19.33
Average 1938-39 to 1947-48 ..	13.33	11.92	15.99	9.71	10.43	25.39	13.35	11.72

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1944-45, namely, 4.41 bushels, while the largest in the last ten years was that of the season 1947-48, amounting to 19.33 bushels per acre, this being the highest yield since 1920-21.

2. *Price of Oats.*—The average wholesale prices in the Melbourne market for oats of good milling quality for the years 1943-44 to 1947-48 in comparison with 1938-39 are shown in the following table :—

OATS : MELBOURNE AVERAGE WHOLESALE PRICES.

(s. d.)

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Average price per bushel ..	3 5½	3 3	3 9½	3 11½	4 3½	4 0½

3. *Value of Oat Crop.*—The estimated values of the oat crop for the seasons 1946-47 and 1947-48 were as follows :—

OATS : VALUE OF CROP (a), 1946-47 and 1947-48.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1946-47—								
Aggregate value £	610,480	1,379,949	21,617	560,536	711,016	146,460	1,983	3,432,041
Value per acre ..	£1/1/11	£3/0/10	£1/8/0	£2/4/5	£1/13/5	£6/9/1	£3/1/5	£1/19/9
1947-48—								
Aggregate value £	2,763,260	5,715,609	138,211	2,782,514	1,328,102	94,540	668	12,822,904
Value per acre ..	£4/10/9	£8/15/10	£5/10/8	£9/0/3	£2/13/8	£5/10/9	£1/11/7	£6/1/10

(a) Excludes the value of straw.

4. **Imports and Exports.**—The production of oats in Australia is sufficient to admit of a regular, though usually small, export trade. The quantities and values of oats imported into and exported from Australia during the years 1943-44 to 1947-48 compared with the average for the years 1934-35 to 1938-39 are shown hereunder :—

OATS : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
Average, 1934-35 to 1938-39	7,723	1,639	286,360	36,458	278,637	34,819
1943-44	643	176	88,040	18,618	87,397	18,442
1944-45	202	72	30,363	9,700	30,166	9,628
1945-46	1,231,085	251,878	429,163	112,931	801,922	138,947
1946-47	85	25	106,645	27,934	106,560	27,909
1947-48	177	61	6,803,427	3,945,807	6,803,250	3,945,746

NOTE.—Minus sign (—) denotes net imports.

The quantity of oats imported into Australia is usually not very large, although in 1945-46 imports exceeded exports by 801,922 bushels. Canada was the chief supplier. The previous year when imports exceeded exports was in 1927-28 (by 460,581 bushels) when New Zealand was the main supplier. In 1947-48 the principal countries of destination of the exports were the United Kingdom, Netherlands, France, Switzerland, Ceylon and Hong Kong.

5. **Oatmeal, etc.**—The production of oatmeal amounted in 1947-48 to 679,217 cwt. equivalent to about 3,800,000 bushels of oats, or about 9.3 per cent. of the total production. Prior to the 1939-45 War the exports of oatmeal were small, but in recent years a considerable export trade has developed and in 1947-48 the quantity shipped amounted to 344,759 cwt. or 50.8 per cent. of total production. Imports in 1947-48 amounted to 192 cwt.

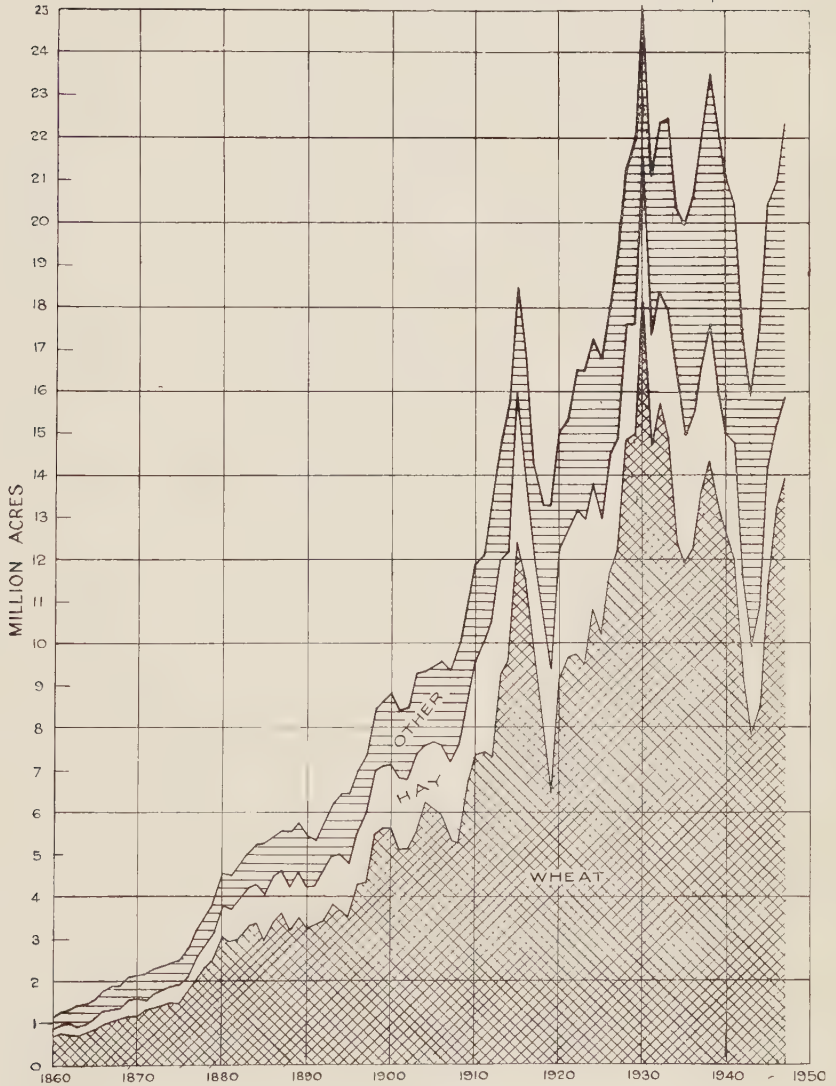
6. **World Production.**—The world's production of oats for the year 1948, as compiled by the Food and Agriculture Organization of the United Nations, amounted to 4,326 million bushels. This quantity was harvested from 135 million acres, and represents an average yield of 32.04 bushels per acre. In comparison with this average return per acre, that of Australia for the same period (10.33 bushels) appears very small. Yields in excess of 40 bushels per acre are not uncommon and some European countries record averages in excess of 50 bushels per acre. The following table shows the world's production and average yield for the period 1935-39 and for each of the five years ended 1948.

OATS : WORLD PRODUCTION.

Year.					Area.	Production.	Average Yield per acre.
					Million Acres.	Million Bushels.	Bushels.
Average 1935-1939	..	..	..	..	139	4,336	31.26
1944 ..	..	..	..	..	134	4,045	30.19
1945 ..	..	..	..	..	128	3,865	30.20
1946 ..	..	..	..	..	129	3,920	30.39
1947 ..	..	..	..	..	128	3,672	28.69
1948(a)	..	..	..	..	135	4,326	32.04

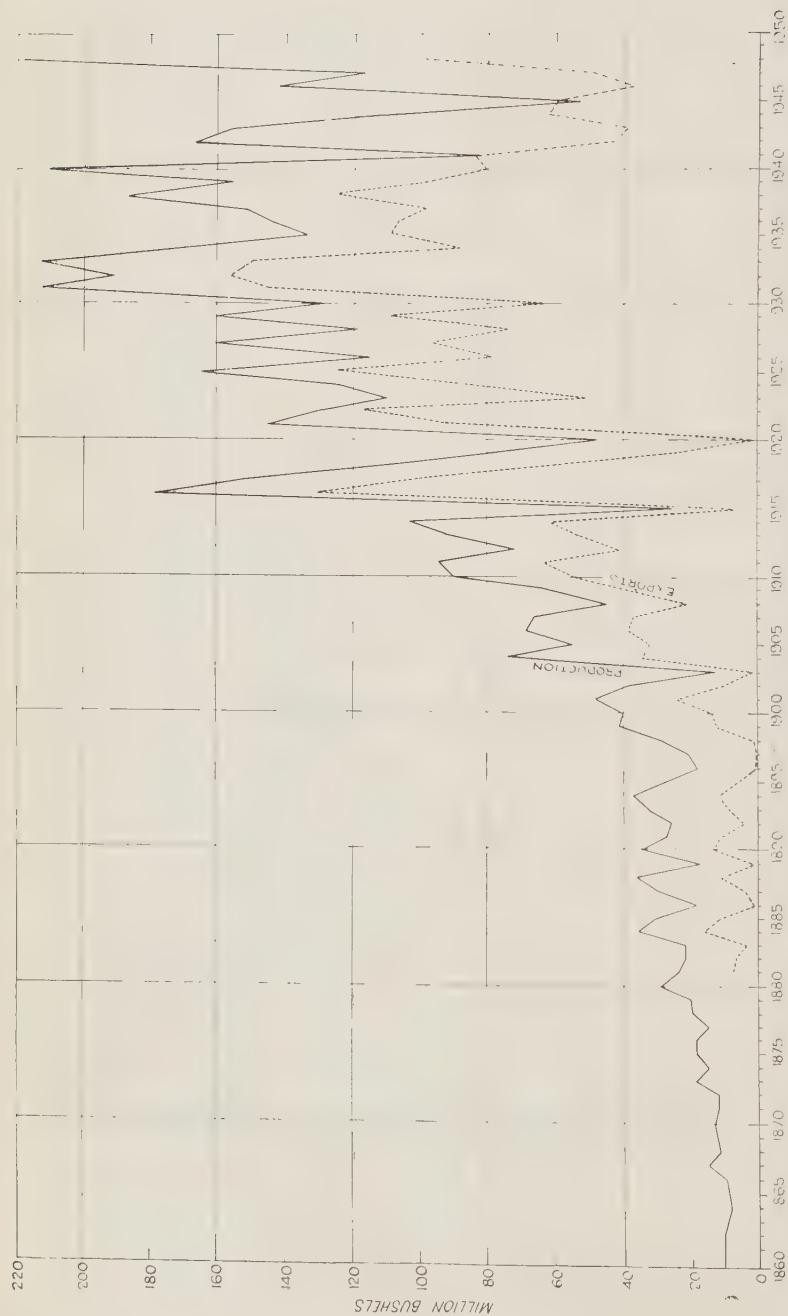
(a) Preliminary. Subject to revision.

AREA OF CROPS—AUSTRALIA, 1860-61 TO 1947-48.



EXPLANATION.—The total area of crops is shown by the top curve in this graph, and the area of wheat by the bottom curve. The vertical distances between these curves and that in the centre indicate the areas of hay and other crops.

PRODUCTION AND EXPORTS OF WHEAT—AUSTRALIA, TO 1947-48.



NOTE.—The export figures for the years 1915-16 to 1920-21 do not represent the surplus available for export in each of these years because of the dislocation of shipping due to the 1914-1918 War. For these years the quantity consumed in Australia has been averaged and the balance taken as exports.

**AREA UNDER WHEAT FOR GRAIN
IN ACRES**

New South Wales	5,043,000
Victoria	3,227,000
Queensland	462,000
South Australia	2,375,000
West Australia	2,760,000
Tasmania	8,000
Aust. Cap. Terr.	5,000
Total	13,880,000

Average yield per acre, 15.86 bushels



§ 6. Maize.

1. *States Growing Maize.*—Maize is grown for grain chiefly in Queensland and New South Wales, the area so cropped in these States during the 1947-48 season being 214,682 acres, or 96 per cent. of the total for Australia. Of the balance, Victoria contributed 7,968 acres and Western Australia 90 acres. The climate of Tasmania is generally unsuitable for the growing of maize for grain although 7 acres were sown in this State in 1947-48. In the States mentioned the crop is also grown to a greater or lesser extent for green fodder, particularly in connexion with the dairying industry.

2. *Area, Production and Average Yield.*—(i) *Area and Production.* Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only about 284,000 acres during the past decennium. Compared with the previous year, the area in 1947-48 decreased by 36,990 acres and was considerably less than the comparatively large areas of 414,914 and 400,544 acres sown in 1910-11 and 1927-28 respectively.

The area and production of maize for grain in each State for the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are given in the following table:—

MAIZE FOR GRAIN : AREA AND PRODUCTION.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
AREA (ACRES.)								
Average 1929-30 to 1938-39 ..	114,881	18,413	161,380	12	15	..	7	294,708
1943-44.. ..	103,237	6,598	172,722	..	105	19	..	282,681
1944-45.. ..	94,107	4,544	158,170	..	125	9	..	256,955
1945-46.. ..	92,416	6,809	136,445	..	48	11	..	235,720
1946-47.. ..	110,038	8,107	141,487	..	98	6	2	259,738
1947-48.. ..	16,979	7,968	127,703	..	90	7	1	222,748
Average 1938-39 to 1947-48 ..	108,783	10,358	165,036	11	68	5	1	284,262
PRODUCTION ('000 BUSHEL). (a)								
Average 1929-30 to 1938-39 ..	3,072	631	3,525	..	..	..	..	7,228
1943-44.. ..	2,769	151	4,512	..	1	..	..	7,433
1944-45.. ..	2,437	165	3,859	..	2	..	..	6,463
1945-46.. ..	2,561	308	2,860	..	..	..	..	5,729
1946-47.. ..	2,507	357	2,943	..	1	..	..	5,808
1947-48.. ..	2,356	324	3,487	..	1	..	..	6,168
Average 1938-39 to 1947-48 ..	2,837	338	3,697	..	1	..	..	6,873

(a) 56 lb. per bushel.

The greatest production of maize in Australia was in 1910-11 when over 13,000,000 bushels were recorded. The production in 1947-48 amounted to 6,168,000 bushels compared with the average of 6,873,000 bushels for the decennium ended 1947-48.

(ii) *Average Yield.* (a) *Australia.* The following table gives particulars of the average yields per acre of the maize crops of the States for the seasons 1943-44 to 1947-48, and for the ten-year periods ended 1938-39 and 1947-48 :—

MAIZE FOR GRAIN : AVERAGE YIELD PER ACRE.
(Bushels.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 ..	26.74	34.28	21.84	29.84	10.02	..	8.48	24.53
1943-44 ..	26.82	22.80	26.12	..	11.89	6.63	..	26.29
1944-45 ..	25.90	36.39	24.40	..	12.34	14.11	..	25.15
1945-46 ..	27.71	45.22	20.96	..	9.75	2.45	..	24.30
1946-47 ..	22.78	44.02	20.80	..	7.99	10.17	15.00	22.36
1947-48 ..	27.10	40.66	27.30	..	7.17	15.73	11.00	27.69
Average 1938-39 to 1947-48 ..	26.08	32.65	22.40	25.48	11.49	8.67	8.09	24.18

The average for Victoria is generally amongst the highest in the world. The area however, is comparatively small and is situated in specially favourable districts. The average for New South Wales is generally higher than that for Queensland.

• (b) *Various Countries.* The average for Australia for the past ten years was 24.18 bushels per acre. During 1947 the United States of America averaged 28.40 bushels, China Proper, 21.53 bushels, Argentina, 38.83 bushels, Rumania, 19.52 bushels and India, 10.89 bushels per acre.

3. *Price of Maize.*—The average wholesale price of maize in the Melbourne market is shown in the following table :—

MAIZE : AVERAGE PRICE, MELBOURNE.
(s. d.)

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Average price per bushel	(a) 4 6½	8 0	8 4	8 5	8 6	8 6

(a) Sydney.

4. *Value of Crop.*—The values of the crop for the seasons 1940-47 and 1947-48 were as follows :—

MAIZE FOR GRAIN : VALUE OF CROP, 1946-47 and 1947-48.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1946-47—								
Aggregate value ..£	927,040	146,416	1,044,458	..	646	40	11	2,118,611
Value per acre ..	£8/8/6	£18/1/3	£7/7/8	..	£6/11/10	£6/13/4	£5/10/0	£8/3/2
1947-48—								
Aggregate value ..£	873,940	162,467	1,303,326	..	503	60	4	2,340,300
Value per acre ..	£10/0/11	£20/7/10	£10/4/1	..	£5/11/9	£8/11/5	£4/0/0	£10/10/2

5. *Maize Products.*—Imports of cornflour into Australia are negligible. Exports of cornflour, which prior to the war were very small, increased considerably during the war years, the principal countries of destination being New Zealand and the Pacific Islands. In 1947-48 3,417,133 lb., valued at £104,944, were exported, compared with an

annual average of 36,761 lb., valued at £364, during the five years ended 1938-39. It should be noted that these figures include some quantities of "cornflour" made from wheat.

6. **Oversea Imports and Exports.**—Details of the imports and exports of maize for the five years ended 1947-48 compared with the five-yearly averages ended 1938-39 are shown below.

MAIZE : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
Average 1934-35 to 1938-39	20,609	4,209	57,432	8,571	36,823	4,362
1943-44	613	1,603	5,166	2,321	4,553	718
1944-45	4	1	4,682	2,237	4,678	2,236
1945-46	14	140	411	899	397	759
1946-47	389	871	1,468	6,147	1,079	5,276
1947-48	313	1,036	547,536	627,565	547,223	626,529

7. **World Production.**—The following table furnishes particulars of the world's acreage, production and average yield per acre of maize, according to records published by the Food and Agriculture Organization of the United Nations:—

MAIZE : WORLD PRODUCTION.

Year.					Area.	Production.	Average Yield per Acre.
					Million Acres.	Million Bushels.	Bushels.
Average 1935-1939					216	4,725	21.88
1944					215	5,240	24.37
1945					209	4,752	22.74
1946					214	5,209	24.34
1947					215	4,772	22.20
1948 (a)					214	5,976	27.93

(a) Preliminary. Subject to revision.

The United States of America is the most important maize-producing country in the world and during the four years ended 1948 the area sown to maize in that country averaged 86.5 million acres or 40.6 per cent. of the world total. During the same period production averaged 3,100 million bushels or about 60 per cent. of the world total. About 85 per cent. of the production is fed to live-stock on farms, 10 per cent. is used for human food, and only a very small fraction—less than 1 per cent.—is exported.

§ 7. Barley.

1. **Area, Production and Average Yield.**—(i) *Area and Production.* The area sown to barley for grain expanded considerably during the ten years preceding the 1930-45 War—from 383,000 acres in 1930-31 to 836,000 acres in 1939-40. This increase was followed by a decline to 443,000 acres in 1943-44 but the area sown has increased in succeeding years and reached the record level of 839,000 acres in 1947-48. Victoria was originally the principal barley-growing State, but since 1913-14 its place has been taken by South Australia which accounted for 67 per cent. of the Australian acreage in 1947-48. Victoria was next in importance with 20 per cent. leaving a balance of about

13 per cent. distributed among the other States. The totals here given relate to the areas harvested for grain; small areas are sown for hay, but more considerable quantities are cut for green forage. These, however, are not included in this section. The area and production of barley for grain in the several States for the years 1913-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table:—

BARLEY FOR GRAIN: AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
AREA ('000 ACRES).								
Average 1929-30 to 1938-39	11	107	8	331	31	7	..	495
1943-44 ..	20	83	13	262	61	4	..	443
1944-45 ..	28	129	15	360	76	6	..	614
1945-46 ..	29	134	21	442	66	7	..	699
1946-47 ..	27	138	9	502	66	6	..	748
1947-48 ..	23	165	17	562	63	9	..	839
Average 1938-39 to 1947-48	22	150	13	434	67	6	..	692

PRODUCTION ('000 BUSHEL). (a)

Average 1929-30 to 1938-39 ..	173	1,976	132	5,714	371	186	1	8,553
1943-44 ..	380	1,078	250	5,057	723	95	6	7,589
1944-45 ..	122	359	319	3,185	884	159	1	5,029
1945-46 ..	496	1,744	520	7,566	666	123	2	11,117
1946-47 ..	107	2,322	68	8,424	519	156	..	11,596
1947-48 ..	519	3,577	433	15,363	745	219	..	20,856
Average 1938-39 to 1947-48	301	2,174	251	7,961	768	148	1	11,604

(a) 50 lb. per bushel.

(ii) *Average Yield.* The average yield of barley per acre varies considerably in the different States, being as a rule highest in Tasmania and lowest in Western Australia. Details for each State during the seasons 1943-44 to 1947-48 and for the ten-year periods ended 1938-39 and 1947-48 are given in the following table:—

BARLEY: YIELD PER ACRE.

(Bushels.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39	16.62	18.44	16.67	17.29	11.89	25.21	18.88	17.29
1943-44 ..	18.91	12.95	19.38	19.34	11.80	27.54	17.20	17.14
1944-45 ..	4.33	2.79	21.01	8.85	11.61	29.42	2.90	8.19
1945-46 ..	17.16	13.00	24.70	17.12	10.03	18.28	21.42	15.90
1946-47 ..	4.01	16.82	7.52	16.78	7.88	24.88	..	15.50
1947-48 ..	22.13	21.78	25.18	27.32	11.79	26.79	19.50	24.87
Average 1938-39 to 1947-48	13.64	14.51	19.99	18.36	11.38	24.67	13.59	16.78

South Australia and Victoria were the only States producing more than 1,000,000 bushels on the average during the past decade, the yields being respectively 7,961,000 and 2,174,000 bushels.

(iii) *Malting (2-row) and Other (6-row) Barley.* (a) *Season 1947-48.* In the following table details of the area sown to barley of the 2-row or malting variety and 6-row or feed variety, and production therefrom for the season 1947-48 are given by States :—

BARLEY, MALTING (2-ROW) AND OTHER (6-ROW) : AREA AND PRODUCTION, 1947-48.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES.)								
Malting (2-row) ..	15	150	12	522	38	8	..	745
Other (6-row) ..	8	15	5	40	25	1	..	94
Total ..	23	165	17	562	63	9	..	839
PRODUCTION ('000 BUSHEL).)								
Malting (2-row) ..	356	3,254	311	14,359	455	201	..	18,936
Other (6-row) ..	163	323	122	1,004	290	18	..	1,920
Total ..	519	3,577	433	15,363	745	219	..	20,856

Taking Australia as a whole, about 89 per cent. of the area of barley for grain in 1947-48 was sown with malting, or 2-row, barley while the remainder consisted of 6-row, or feed varieties. The proportion, however, varied considerably in the several States. The disposal of barley during the season 1947-48 was as follows: malt works, 4,976,615 bushels; flour and other grain mills, 889,876 bushels; distilleries, 175,296 bushels; exports, 8,050,016 bushels: leaving a balance of 6,764,129 bushels for feed, seed and other purposes.

(b) *Area, Production and Average Yield.* The following table sets out the acreage and production of malting and other barley in Australia during the seasons 1913-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48.

BARLEY, MALTING AND OTHER : AREA AND PRODUCTION, AUSTRALIA.

Season.	Area. ('000 Acres.)			Production. ('000 Bushels.)			Average Yield per Acre. (Bush.)		
	Malting (2-row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.
Average 1929-30 to 1938-39 ..	428	67	495	7,480	1,073	8,553	17.49	16.03	17.29
1943-44 ..	357	86	443	6,397	1,192	7,589	17.89	13.96	17.14
1944-45 ..	500	114	614	4,188	841	5,029	8.38	7.38	8.19
1945-46 ..	593	106	699	9,581	1,536	11,117	16.15	14.52	15.90
1946-47 ..	663	85	748	10,558	1,038	11,596	15.92	12.27	15.50
1947-48 ..	745	94	839	18,936	1,920	20,856	25.43	20.46	24.87
Average 1938-39 to 1947-48 ..	588	103	691	10,178	1,426	11,604	17.30	13.81	16.78

During the past ten seasons the average area of barley of the malting, or 2-row class, was nearly six times the corresponding figures for barley of the 6-row, or feed class. The average yield per acre for the last ten-yearly period for malting barley was 25 per cent. higher than that for 6-row barley.

2. **Australian Barley Board.**—Following the outbreak of war in 1939, the Australian Barley Board, representative of the industry, was formed, and the Commonwealth Government acceded to its request to acquire the entire 1939-40 barley crop, which was placed under the control of the Board. A pool was established from which proceeds were distributed with appropriate margins for different grades of barley.

The Board is responsible for the marketing and storage of barley, and, like the Australian Wheat Board, has appointed licensed receivers to receive grain on its behalf and to act as agents for all local and oversea sales.

Following the decision of the Commonwealth Government not to acquire barley in smaller producing States after 1941-42, the Governments of Western Australia and Queensland established State Barley Boards to control marketing in these States.

Particulars of the barley acquired and sold, and of advances made to growers by the Australian Barley Board in respect of the 1943-44 to 1947-48 crops are given in the following table. The Commonwealth Government did not acquire barley after the 1947-48 crop and the Victorian and South Australian Governments formed a joint board under the same name as the former Commonwealth board to market the 1948-49 crops of the two States. Details of this acquisition are also shown in the table below.

**AUSTRALIAN BARLEY BOARD : BARLEY ACQUIRED, SOLD, ETC.,
TO JANUARY, 1950.**

Pool.		Quantity Acquired.	Quantity Sold.(a)	Total Advances made per Bushel on 2-row No. 1 Grade.		Total Payments to Growers.
				'000 bushels.	s. d.	
No. 5 (1943-44 Crop)	.. ..	3,340	3,356	4	5.75	649,579
No. 6 (1944-45 " )	.. ..	2,171	2,190	5	0	541,484
No. 7 (1945-46 " )	.. ..	6,716	6,782	6	0.17	1,962,049
No. 8 (1946-47 " )	.. ..	8,543	8,572	8	4.625	3,497,956
No. 9 (1947-48 " )	.. ..	17,238	(b) 17,243	b14	8	b12,411,683
No. 10 (1948-49 " )	.. ..	13,958	(b) 11,114	(b)6	6	b4,520,216

(a) Includes surplus in out-turn.

(b) Subject to revision.

3. **Prices.**—The average prices in the Melbourne market during each of the years 1938-39 and 1943-44 to 1947-48 are given in the following table:—

BARLEY : AVERAGE MELBOURNE PRICES PER BUSHEL.

(s. d.)

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Malting barley ..	3 5½	5 3	5 7½	6 1	6 1	6 5½
Cape barley ..	2 11½	4 0	4 10½	5 4	5 4	5 8½

4. **Value of Barley Crop.**—The estimated values of the barley crop for the seasons 1946-47 and 1947-48 and the value per acre are shown in the following table:—

BARLEY FOR GRAIN : VALUE OF CROP(a), 1946-47 and 1947-48.

Value.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1946-47—								
Aggregate value £	39,550	811,317	17,610	3,798,946	136,968	42,540	..	4,846,931
Value per acre	£1/19/8	£5/17/7	£1/18/8	£7/11/4	£2/1/7	£6/15/11	..	£6/9/7
1947-48—								
Aggregate value £	184,620	2,500,808	148,610	13,113,942	291,667	59,590	12	16,299,249
Value per acre	£7/17/3	£15/4/8	£8/12/0	£23/6/4	£4/12/5	£7/0/3	£6/0/0	£19/8/9

(a) Excludes the value of straw.

5. **Imports and Exports.**—Australian exports of barley during the five years ended 1947-48 averaged 2,441,000 bushels, South Australia being the principal exporting State. Particulars of the Australian overseas imports and exports for the years 1943-44 to 1947-48 together with the average for the five years ended 1938-39 are shown in the following table :—

BARLEY : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 Bushels.	£	'000 Bushels.	£	'000 Bushels.	£
Average 1934-35 to 1938-39	1,483	261,730	3,279	483,246	1,796	221,516
1943-44 .. ..	..	4	998	205,790	998	205,786
1944-45 .. ..	..	..	199	57,277	199	57,277
1945-46	953	219,071	702	359,741	-251	140,670
1946-47 .. ..	..	..	2,256	1,636,020	2,256	1,636,020
1947-48 .. ..	..	1	8,050	8,134,000	8,050	8,133,999

NOTE.—Minus sign (—) denotes net imports.

In addition to barley grain, there is also an export of Australian pearl and scotch barley, the total for 1947-48 amounting to 27,588,057 lb., valued at £884,919, and consigned mainly to Italy, Singapore and India.

6. **Malt.**—(i) *Production.* The production of malt in Australia is sufficient to meet local requirements and to provide a margin for export as indicated below. Details of the quantity of grain used and the production of barley and other malt are given in the following table.

MALT : GRAIN USED AND MALT PRODUCED, AUSTRALIA.

Year.	Barley Malt.		Wheaten and Oaten Malt.	
	Grain used.	Malt produced.	Grain used.	Malt produced.
	Bushels.	Bushels.(a)	Bushels.	Bushels.(a)
1938-39	3,729,730	3,620,909	(b)	111,728
1943-44	3,915,925	3,822,215	221,739	196,153
1944-45	3,568,981	3,512,957	291,909	286,844
1945-46	3,734,780	3,596,004	241,992	229,811
1946-47	4,669,729	4,563,920	173,772	158,387
1947-48	4,976,615	4,879,145	186,772	170,877

(a) 40 lb. per bushel.

(b) Not available.

(ii) *Imports and Exports.* The surplus production of malt in Australia, after meeting local requirements, is shipped chiefly to the Far East and New Zealand. Details of imports and exports for the years 1943-44 to 1947-48, together with the average for the five years ended 1938-39 are given in the next table :—

MALT : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
Average 1934-35 to 1938-39 ..	248	133	108,798	37,780	108,550	37,647
1943-44 .. ..	..	..	19,695	9,756	19,695	9,756
1944-45 .. ..	..	..	27,390	12,521	27,390	12,521
1945-46 .. ..	..	..	15,040	6,590	15,040	6,590
1946-47 .. ..	..	..	20,673	8,023	20,673	8,023
1947-48 .. ..	..	..	12,920	14,159	12,920	14,159

7. **World Production.**—In comparison with the barley production of other countries, that of Australia is extremely small. World production in 1948 is placed at 2,388 million bushels, the main producers being U.S.S.R. (Russia), China and the United States of America. Australian production in that year was less than one per cent. of the world total.

The following table shows the latest available details of the world's acreage of barley, together with the production and average yield per acre, according to the results compiled by the Food and Agriculture Organization of the United Nations :—

BARLEY : WORLD PRODUCTION.

Period.					Area.	Production.	Average Yield per Acre.
					Million Acres.	Million Bushels.	Bushels.
Average 1935-1939	..	..	..	..	114.2	2,338	20.47
1944 ..	..	..	..	..	108.6	2,180	20.07
1945 ..	..	..	..	..	105.3	1,911	18.15
1946 ..	..	..	..	..	103.0	2,016	19.57
1947 ..	..	..	..	..	110.7	2,122	19.17
1948(a)	..	..	..	..	116.1	2,388	20.57

(a) Preliminary. Subject to revision.

§ 8. Rice.

Rice growing is almost entirely concentrated in Asia and the extent to which this crop is grown in other countries is relatively small. In Australia experimental rice cultivation was carried on at the Yanco Experimental Farm in New South Wales for a number of years before 1924-25, but it was not until that year that an attempt was made to grow the crop on a commercial basis, 16,240 bushels being produced from 153 acres, or an average of 106 bushels per acre. Favoured by tariff protection and high average yields, the development of rice culture in the Murrumbidgee Irrigation Area made rapid progress, and production soon equalled Australian requirements and later provided a margin for export.

The area which growers may plant is subject to control. Each year representatives of the Rice Marketing Board, rice growers, the Department of Agriculture and the Water Conservation and Irrigation Commission of New South Wales meet to decide the maximum area which growers may plant in the following season. Because of war-time demands the areas sown were expanded, but the extent of any expansion is determined by the limits imposed by the quantity of water available.

Consequent upon the outbreak of war in the Pacific in 1941 and the enemy occupation of the rice producing countries north of Australia, the demand for rice was so great as to be beyond the capacity of the industry. From August, 1942 civilian consumption in Australia was prohibited, except in the case of invalids, hospitals, resident Asiatics and other priorities, and the total production was diverted to service needs and for the feeding of natives in the south-west Pacific area. Towards the end of 1950 the distribution of rice reverted to the trade, and supplies have been made available for general consumption.

For the five years ended 1938-39 the area sown to rice in the Murrumbidgee Irrigation Area averaged 22,800 acres. No marked expansion occurred until after Japan's entry into the war in 1941. The area was increased to 34,300 acres in 1942-43 and to 36,500

acres in 1943-44. This expansion was not sufficient to meet the war-time demand and new areas in the Wakool and Borenembah Irrigation Districts of New South Wales were developed, bringing the total area for the State and for Australia to 40,090 acres in 1943-44. Owing to water shortage the area sown in 1944-45 fell to 24,596 acres, but rose to 28,372 acres in 1945-46 and to 31,995 acres in 1946-47. A decline to 26,208 acres was recorded in 1947-48. The production of rice in the Wakool District was suspended in 1946-47 and 1947-48 but was resumed in 1948-49.

The production of paddy rice reached its highest level in 1943-44 with more than 4 million bushels or an average yield of just under 100 bushels per acre. In 1944-45 it dropped to nearly 1.7 million bushels or 68.8 bushels per acre due to water shortage arising from severe drought conditions. In 1947-48 production amounted to 2.7 million bushels or an average of 102.1 bushels per acre.

Prior to 1938-39 the greater part of Australia's export of rice was consigned to the United Kingdom, but, because of shortages in Pacific areas arising from war damage in south-east Asia, exports from Australia have been diverted mainly to the islands in this region.

Details relating to area, production, and trade for the years 1943-44 to 1947-48 compared with the averages for the years 1934-35 to 1938-39 are shown in the following table:—

RICE : AREA, PRODUCTION AND TRADE, AUSTRALIA.(a)

Year.	No. of Growers.	Area.	Production (Paddy Rice).		Average Yield (Paddy) per acre.	Imports.		Exports.	
			Quantity.	Gross Value. (b)		Uncleaned.	Cleaned.	Uncleaned.	Cleaned.
		Acres.	'000 Bushels.c	£'000.	Bushels.	Centals.	Centals.	Centals.	Centals.
Average 1934-35 to 1938-39 ..	(d) 313	22,823	2,274	450	99.66	2,124	38,272	9,357	271,851
1943-44 ..	364	40,690	4,015	983	98.67	1	3,258	259,230	531,158
1944-45 ..	330	24,596	1,693	416	68.82	..	..	262,429	188,815
1945-46 ..	329	28,372	2,735	672	96.40	..	420	344,874	222,485
1946-47 ..	350	31,995	2,978	892	93.08	13	6	28,419	530,985
1947-48 ..	349	26,208	2,676	950	102.12	4	1	4,763	622,208

(a) Rice growing in Australia has been confined to New South Wales.
of straw.

(c) 42 lb. per bushel.

(b) Excludes the value
(d) 1938-39 figure, previous years not collected.

§ 9. Sorghum for Grain.

1. Area, Production and Average Yield.—The growing of sorghum for grain on an extensive scale is a recent development in Australia. No details of the area and production of this cereal are available prior to 1939-40 but the output was of little importance. The climatic conditions of Queensland and northern New South Wales are particularly suited for the growing of sorghum and the development so far has been restricted to these areas, but more particularly to Queensland which accounts for the greater portion of the area sown. The grain produced is fed to live-stock and is becoming an important source of supply for supplementing other coarse grains for the feeding of live-stock. Other sorghums are grown in Australia mainly as green fodder, hay and for the production of brush for broom manufacture. Details of these are included in § 14 and § 19 hereinafter. Particulars of the area and production of sorghum grown for grain are given in the following table.

GRAIN SORGHUM : AREA, PRODUCTION AND YIELD, AUSTRALIA.

Year.	Area.			Production.			Average Yield per Acre.		
	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.
	Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1939-40 ..	(a)	4,397	b 4,397	(a)	57,936	b 57,936	(a)	13.17	b 13.17
1943-44 ..	(a)	54,685	b 54,685	(a)	1,333,073	b 1,333,073	(a)	24.30	b 24.30
1944-45 ..	8,393	54,709	63,102	126,372	1,110,477	1,236,849	15.06	20.30	19.60
1945-46 ..	6,248	49,451	55,699	100,182	918,780	1,018,962	16.03	18.58	18.29
1946-47 ..	51,868	68,775	120,643	629,097	1,295,442	1,924,539	12.13	18.84	15.95
1947-48 ..	24,680	116,079	140,759	467,412	3,335,322	3,802,734	18.94	28.73	27.01

(a) Not available.

(b) Queensland only.

2 Queensland-British Food Corporation Project.—Early in 1948 an agreement was entered into between the Queensland Government and the Overseas Food Corporation of the United Kingdom Government to develop selected areas of Central Western Queensland for the growing of grain sorghum for pig-raising in Queensland and/or for export to the United Kingdom, and for sunflower and possibly other oilseed production. The Queensland-British Food Corporation was established in April, 1948 with head-quarters in Brisbane, some 300,000 acres of land being initially acquired for the project. The land acquired comprises the pastoral property known as "Peak Downs" and other similar properties in the Central Western District of the State and is estimated to embrace about 180,000 acres of arable land. The first year's operations of the Corporation consisted of developmental work, the seeding of 29,286 acres of grain sorghum and the sowing of small areas with sunflower and other experimental crops on the "Peak Downs" property for 1949 cropping. The ultimate target of the Corporation is the establishment of 250,000 acres under cultivation and the raising of pigs on an appropriate scale for export to Britain. In addition, it is planned to run other stock on areas of the properties acquired by the Corporation which are suitable only for grazing.

§ 10. Other Grain and Pulse Crops.

In addition to the grain crops already specified, the principal other grain and pulse crops grown in Australia are navy beans, blue peas and rye.

The areas of crops of blue peas and navy beans for the season 1947-48 were 7,662 acres and 3,595 acres respectively, giving yields of 4,431 tons and 653 tons, or averages of 0.58 tons and 0.18 tons respectively per acre. Navy beans are grown chiefly in New South Wales, Queensland and Victoria in that order, but in other States the quantity produced is negligible. The production of blue peas is almost entirely restricted to Tasmania which now accounts for over 90 per cent. of the total area and production for Australia. Blue peas are exported in considerable quantities to the United Kingdom, the chief exporting State being Tasmania.

The total area of rye in Australia during the season 1947-48 was 36,072 acres, yielding 181,937 bushels, or an average of 5.04 bushels per acre, as compared with the average of 6.85 bushels for the last ten seasons. Of the total area sown to rye in 1947-48, about 69.4 per cent. was in South Australia, 22.6 per cent. in Victoria, and 5.5 per cent. in Western Australia.

§ 11. Potatoes.

1. Area, Production and Average Yield.—(i) *Area and Production.* Victoria possesses peculiar advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavorable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands, the south-western and Gippsland districts. Tasmania comes next in order of acreage sown, although the production exceeded that of Victoria in some of the war years. New South Wales occupies third place in acreage and production. The area for these three States accounted for 80 per cent. of the total for Australia in 1947-48.

The area sown and production of potatoes in each State during the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown hereunder:—

POTATOES : AREA SOWN AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA SOWN (ACRES).								
Average 1929-30 to								
1938-39	19,199	54,658	11,039	5,042	4,953	34,684	30	129,605
1943-44	30,067	70,430	14,009	8,958	7,375	60,500	136	192,075
1944-45	34,796	83,238	18,173	12,562	11,735	81,092	207	241,803
1945-46	22,863	63,000	15,216	8,854	9,781	56,245	118	176,079
1946-47	21,309	56,400	10,536	6,191	6,961	43,227	105	144,729
1947-48	21,911	59,400	10,664	6,202	6,955	40,382	115	145,629
Average 1938-39 to								
1947-48	22,706	52,838	12,266	6,841	7,100	44,698	93	146,542

PRODUCTION (TONS).

Average 1929-30 to								
1938-39	44,122	150,238	18,100	20,202	23,410	94,500	63	350,635
1943-44	65,655	217,380	30,717	35,991	30,552	217,800	960	599,055
1944-45	80,587	305,216	33,644	64,154	51,190	345,232	1,026	881,049
1945-46	61,768	230,749	33,605	35,097	47,672	236,140	575	645,606
1946-47	61,303	223,782	22,599	29,212	36,042	170,621	518	544,077
1947-48	65,535	184,882	29,299	34,181	40,908	142,746	716	497,967
Average 1938-39 to								
1947-48	56,851	186,152	25,776	32,096	35,242	167,610	452	504,179

The area sown to potatoes averaged 129,605 acres during the ten years ended 1938-39 and rose to 146,542 acres for the decennium ended 1947-48. After the outbreak of war in the Pacific in December, 1941, the area sown to potatoes rose rapidly and reached a peak of 241,803 acres in 1944-45. This was followed by a sharp fall to 176,079 acres in 1945-46 and to 144,729 acres in 1946-47. The area sown in 1947-48 was 145,629 acres.

The expansion during the war years was necessary in order to meet the large demand for potatoes by Australian and Allied Servicemen based upon Australia and to maintain supplies for civil needs. As a result, production rose to the record level of 881,049 tons in 1944-45. The production recorded for 1947-48 represented a decline of 43.5 per cent. from the war-time peak.

(ii) *Average Yield.* Average yields for each State for the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown hereunder:—

POTATOES : AVERAGE YIELD PER ACRE.

(Tons.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to								
1938-39	2.30	2.75	1.64	2.50	4.73	2.72	2.09	2.71
1943-44	2.18	3.09	2.10	4.02	4.14	3.60	7.06	3.12
1944-45	2.32	3.67	1.85	5.11	4.36	4.26	4.96	3.64
1945-46	2.70	3.66	2.21	3.96	4.87	4.20	4.87	3.67
1946-47	2.88	3.97	2.14	4.72	5.18	3.95	4.93	3.76
1947-48	2.99	3.11	2.75	5.51	5.84	3.53	6.23	3.42
Average 1938-39 to								
1947-48	2.50	3.52	2.10	4.69	4.96	3.76	4.86	3.44

Compared with the average yield per acre obtained in other countries, that returned for Australia is low; the production in New Zealand, for example, in 1946-47 averaged 5.81 tons per acre from an area of about 20,000 acres, as compared with 3.76 tons per acre in Australia from 144,729 acres.

(iii) *Relation to Population.* The average annual production of potatoes for the last five seasons was 85 tons per 1,000 of population. In Tasmania, where this crop is of far greater importance in relation to population than is the case in any other State, the production per head in 1906-7 was nearly a ton, while for the last five seasons it has averaged almost 18 cwt. due to the abnormally high production during the war years, in one of which, 1944-45, it averaged 1.4 tons per head. Details for each State for the 1938-39 and 1943-44 to 1947-48 seasons are as follows:—

POTATOES : PRODUCTION PER 1,000 OF POPULATION.
(Tons.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1938-39 ..	14	43	19	31	57	377	9	40
1943-44 ..	23	109	29	58	63	893	69	82
1944-45 ..	28	152	31	103	105	1,402	71	120
1945-46 ..	21	114	31	55	97	947	39	87
1946-47 ..	21	110	21	46	73	669	32	72
1947-48 ..	22	89	26	52	80	545	40	65

2. *Gross Value of Potato Crop.*—The estimated gross value of the potato crop of each State for the seasons 1946-47 and 1947-48 is given in the following table:—

POTATOES : VALUE OF CROP, 1946-47 and 1947-48.

Value.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1946-47 ..								
Aggregate value£	904,220	2,479,641	357,817	398,312	453,300	2,132,763	7,640	6,733,603
Value per acre£	£12.88	£11.19	£13.10	£10.10	£10.05	£2,700	£72.15	£10.10
1947-48 ..								
Aggregate value£	1,032,180	2,251,590	468,784	446,944	548,208	1,784,320	11,273	6,543,200
Value per acre£	£17.12	£15.18	£13.10	£12.10	£12.17	£1,112	£10.10	£11.17

3. *Consumption.*—The annual consumption of potatoes in Australia during each of the three years 1946-47 to 1948-49 amounted to 440,000 tons, 450,200 tons and 403,500 tons respectively, or 133.0 lb. 132.0 lb. and 115.9 lb. per head of population respectively. These figures exclude the quantities used for seed, which averaged about 60,000 tons annually over this period. Consumption during the three years ended 1938-39 averaged 318,500 tons (103.8 lb. per head of population) excluding 37,000 tons for seed. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.

4. *Australian Potato Committee.*—Full details of the war-time potato marketing scheme operated under the National Security (Potatoes) Regulations by the Australian Potato Committee were shown on p. 929 of Official Year Book No. 37. The Committee ceased to function as from the close of the 1947-48 season.

In the following table details of the quantities of potatoes received and the manner of their distribution are given for the years ended 31st October, 1944 to 1948 according to the records of the Committee. The details shown exclude quantities which did not come within the Committee's control.

AUSTRALIAN POTATO COMMITTEE : RECEIVALS AND DISPOSALS OF POTATOES, AUSTRALIA.

(Tons.)

Particulars.	Year ended 31st October—				
	1944.	1945.	1946.	1947.	1948.
Quantity received from current crop	441,435	619,710	477,980	413,418	404,013
Carry-over from previous year ..	..	..	55,166	48,371	(a)30,000
Total	441,435	619,710	533,146	461,789	434,013
Distribution—					
Human consumption ..	394,660	412,224	414,743	405,674	399,001
Exports	5,226	25,005	22,287	15,498	17,007
Canning, including Meat Packs	10,473	19,490	7,078	1,530	1,652
Dehydration	21,758	59,025	29,270	148	60
Loss in weight, stock feed and waste	3,318	48,800	11,397	8,939	9,254
Carried to next year, including quantities in transit ..	..	55,166	48,371	(a)30,000	7,039
Total	441,435	619,710	533,146	461,789	434,013

(a) Partly estimated.

5. **Post-war Marketing.**—Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948 with the completion of sales of the 1947-48 crop.

The 1948-49 crops have been marketed by Boards established in the respective States under State legislation. Although the State Boards operate separately they have a working arrangement for the interstate marketing of potato crops.

6. **Imports and Exports.**—Prior to the 1939-45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. Since the war an expanded export trade has been developed, principally with Eastern countries including Singapore, Ceylon, Hong Kong and Indo-China. Details showing the trade for the years 1943-44 to 1947-48 and the period 1934-35 to 1938-39 are given in the following table :—

POTATOES : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Average 1934-35 to 1938-39	Tons.	£	Tons.	£	Tons.	£
1938-39	5	79	18,838	16,639	18,833	16,560
1943-44 .. ..	..	..	2,956	43,932	2,956	43,932
1944-45 .. ..	..	5	8,152	135,545	8,152	135,540
1945-46 .. ..	..	21	44,645	861,023	44,645	861,002
1946-47 .. ..	..	3	25,852	504,658	25,852	504,655
1947-48 .. ..	..	1	30,008	622,379	30,008	622,378

§ 12. Onions.

1. Area, Production and Average Yield.—Australia's supply of onions comes chiefly from Victoria which accounted for 62.5 per cent. of the total area and 71.6 per cent. of the quantity produced in 1947-48. Queensland came next with nearly 22.1 per cent. of the area and 14.9 per cent. of the production, leaving a balance of about 15.4 per cent. of area and 13.5 per cent. of production distributed among the remaining four States. The Victorian crop consists almost entirely of brown onions of good keeping qualities, and the bulk of the crop is grown in a small section of the Western Division of the State, where soil conditions have been found to be particularly suitable for onion growing on a commercial scale. Onion production in 1947-48 was a record at 85,997 tons and exceeded the average for the ten years ended in 1947-48 by 39,102 tons or 75.9 per cent. The yield per acre in 1947-48 was 8.00 tons, this also being a record. Details of the area, production and average yield per acre are given in the following table for the years 1943-44 to 1947-48 together with averages for the ten-year periods ended 1938-39 and 1947-48.

ONIONS : AREA, PRODUCTION AND AVERAGE YIELD.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average 1929-30 to 1938-39 ..	124	6,159	840	450	109	5	3	7,690
1943-44 ..	876	6,151	1,934	702	445	62	5	10,175
1944-45 ..	835	7,905	2,124	635	330	50	9	11,888
1945-46 ..	747	8,170	2,537	511	383	52	8	12,408
1946-47 ..	408	6,460	1,497	521	431	27	3	9,347
1947-48 ..	568	6,722	2,378	583	475	19	6	10,751
Average 1938-39 to 1947-48 ..	584	6,005	1,660	576	333	46	5	9,209
PRODUCTION (TONS).								
Average 1929-30 to 1938-39 ..	354	35,431	2,548	3,414	814	20	11	42,592
1943-44 ..	2,774	27,994	7,665	5,274	2,945	237	33	46,922
1944-45 ..	2,587	47,277	8,677	5,429	2,377	137	28	66,512
1945-46 ..	2,939	46,338	9,939	4,779	2,720	54	24	66,793
1946-47 ..	1,710	28,244	6,089	4,774	3,562	203	15	44,597
1947-48 ..	2,158	61,540	12,843	5,350	4,000	75	31	85,997
Average 1938-39 to 1947-48 ..	1,831	33,413	6,319	4,741	2,434	135	22	48,895
AVERAGE YIELD PER ACRE. (TONS).								
Average 1929-30 to 1938-39 ..	2.85	5.75	3.03	7.59	7.47	4.00	3.67	5.54
1943-44 ..	3.17	4.55	3.96	7.51	6.62	3.82	6.60	4.61
1944-45 ..	3.10	5.98	4.09	8.55	7.20	2.74	3.11	5.59
1945-46 ..	3.93	5.67	3.92	9.35	7.10	1.04	3.00	5.38
1946-47 ..	4.19	4.37	4.07	9.16	8.26	7.52	5.00	4.77
1947-48 ..	3.80	9.16	5.40	9.18	8.42	3.95	5.17	8.00
Average 1938-39 to 1947-48 ..	3.14	5.56	3.81	8.23	7.30	2.97	4.27	5.31

Details of the area and production of fresh vegetables other than potatoes and onions are given in § 18.

2. **Gross Value of Onion Crop.**—The gross value of the onion crop is shown in the following table for the years 1938-39 and 1943-44 to 1947-48.

ONIONS : GROSS VALUE, AUSTRALIA.

Year.				Total Production.	Gross Value of Crop.	Average value per ton.	Average value per acre.
				Tons.	£	£ s. d.	£ s. d.
1938-39	..	..	..	18,372	305,744	16 12 10	45 11 7
1943-44	..	..	..	46,922	695,909	14 16 7	68 7 2
1944-45	..	..	..	66,512	1,129,246	16 19 7	94 19 10
1945-46	..	..	..	66,793	961,111	14 7 9	77 9 2
1946-47	..	..	..	44,597	744,332	16 13 10	79 12 8
1947-48	..	..	..	85,997	1,244,771	14 9 6	115 15 8

3. **Consumption.**—Details of the estimated total production and consumption of onions for the three years ended 1938-39 and each year 1946-47 to 1948-49 are shown in the following table.

ESTIMATED TOTAL PRODUCTION AND CONSUMPTION OF ONIONS : AUSTRALIA.
(’000 Tons.)

Particulars.				Average 1936-37 to 1938-39.	1946-47.	1947-48.	1948-49.
Estimated total production(a)	..	..	..	46.3	51.6	94.0	65.1
Imports	..	..	..	2.8	0.1	..	..
Total	..	..	..	49.1	51.7	94.0	65.1
Exports (including Ships’ Stores)	..	..	..	4.0	7.5	18.5	12.2
Estimated Wastage	..	..	..	4.5	2.4 (b)	18.5	2.8
Estimated Consumption	..	..	..	40.6	41.8	57.0	50.1
Estimated Consumption per Head of Population	..	..	..	13.2	12.5	16.7	14.4

(a) Includes estimates for “self-suppliers.”

(b) Includes quantities used for dehydration.

4. **Imports and Exports.**—Onions are the only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia. During the five years ended 1947-48, 98 tons, valued at £1,952 were imported, principally from New Zealand, while during the same period the exports, which amounted to 36,203 tons, valued at £694,001, were shipped mainly to Canada and the Pacific Islands.

§ 13. Hay.

1. **General.**—(i) *Area and Production.* As already stated, the chief crop in Australia is wheat grown for grain. In most years hay is next in importance but in 1947-48 it was third to oats (for grain), the area of the latter crop constituting a record.

Nevertheless, the 1947-48 hay area represented 8.8 per cent. of the total area cropped. A graph showing the area sown to hay since 1860 appears on page 963. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion consists of oats, wheat and lucerne. The area and production of hay of all kinds in the several States during the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown below :—

HAY : AREA AND PRODUCTION.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES).								
Average 1929-30 to 1938-39 ..	757,010	1,110,616	67,850	541,265	432,217	83,118	2,338	2,994,414
1943-44 ..	534,470	740,672	71,992	312,277	282,614	99,283	2,806	2,044,114
1944-45 ..	585,829	901,983	64,783	428,173	328,729	96,012	3,174	2,408,683
1945-46 ..	758,400	1,060,496	69,084	484,060	281,410	99,758	4,028	2,757,236
1946-47 ..	546,431	677,787	67,757	329,307	277,489	104,014	2,973	2,005,758
1947-48 ..	627,654	657,146	71,834	296,261	229,172	84,354	3,766	1,970,187
Average 1938-39 to 1947-48 ..	699,423	881,718	66,295	428,781	320,023	91,042	3,281	2,490,563
PRODUCTION (TONS).								
Average 1929-30 to 1938-39 ..	958,549	1,263,127	104,297	577,100	463,981	119,826	2,830	3,489,710
1943-44 ..	735,641	903,103	138,080	407,078	314,359	153,834	4,777	2,716,872
1944-45 ..	371,153	704,246	115,263	316,802	338,912	145,911	1,231	1,993,518
1945-46 ..	990,747	1,444,250	126,258	521,957	287,476	117,079	5,208	3,492,975
1946-47 ..	350,367	685,204	106,104	235,205	200,562	104,824	2,701	2,357,120
1947-48 ..	978,236	1,042,438	132,694	443,659	267,901	137,648	5,182	3,007,758
Average 1938-39 to 1947-48 ..	792,130	1,092,696	116,407	506,520	346,960	132,756	4,126	2,991,595

Owing to various causes, the principal being the variation in the relative prices of grain and hay and the favourableness or otherwise of the season for a grain crop, the area of hay is liable to fluctuate considerably. The area under hay in Australia during the season 1915-16, 3,597,771 acres, was the largest on record, whilst the average for the decennium ended 1947-48 was 2,490,563 acres.

(ii) *Average Production per acre.* During the last ten years Queensland and Tasmania show the highest average production per acre, although the area sown in these States is small. For the same period the lowest yield for Australia as a whole was that of 10.6 cwt. per acre in 1944-45, while the highest was that of 30.6 cwt. in 1947-48. The average for the decennium was 24.0 cwt. Particulars for the several States for the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are given hereunder :—

HAY : PRODUCTION PER ACRE.

(Tons).

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39 ..	1.27	1.14	1.54	1.07	1.07	1.44	1.21	1.17
1943-44 ..	1.38	1.30	1.92	1.30	1.11	1.55	1.70	1.33
1944-45 ..	0.63	0.78	1.75	0.74	1.03	1.52	0.39	0.83
1945-46 ..	1.31	1.36	1.83	1.08	1.02	1.17	1.29	1.27
1946-47 ..	0.70	1.45	1.57	1.31	1.01	1.63	0.91	1.18
1947-48 ..	1.56	1.59	1.85	1.50	1.17	1.63	1.38	1.53
Average 1938-39 to 1947-48 ..	1.13	1.24	1.76	1.18	1.08	1.46	1.26	1.20

(iii) *Varieties Grown.* Information regarding areas cut for hay is available for all States, and details for 1938-39 and the five seasons ended 1947-48 are given in the following table:—

HAY : AREA UNDER VARIOUS KINDS GROWN.

(Acres.)

Varieties.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
NEW SOUTH WALES—						
Wheaten	559,437	198,066	279,120	389,918	263,557	278,361
Oaten	413,002	252,300	237,834	289,720	198,134	228,359
Lucerne	92,598	82,179	66,820	69,745	79,666	110,324
Other	3,888	1,925	2,055	9,017	5,074	10,610
Total	1,068,925	534,470	585,829	758,400	546,431	627,654
VICTORIA—						
Wheaten	258,839	71,467	104,488	114,165	65,354	52,020
Oaten	722,528	448,315	602,300	667,451	356,442	340,036
Lucerne	(a) 36,838	36,040	32,674	44,416	41,330	45,809
Other	86,353	184,850	162,521	234,464	214,661	219,281
Total	1,104,558	740,672	901,983	1,060,496	677,787	657,146
QUEENSLAND—						
Wheaten	6,628	6,891	10,377	13,015	9,573	7,388
Oaten	4,901	6,889	5,944	6,817	5,146	7,046
Lucerne	50,228	50,391	42,427	45,645	44,510	46,798
Other	3,975	7,821	6,035	3,607	8,528	10,602
Total	65,732	71,992	64,783	69,084	67,757	71,834
SOUTH AUSTRALIA—						
Wheaten	227,604	120,129	208,667	224,170	134,391	106,404
Oaten	270,425	157,352	184,603	211,361	159,681	149,461
Lucerne	4,805	4,157	3,079	8,902	4,940	6,800
Other	16,475	30,639	31,824	39,627	30,295	33,596
Total	519,309	312,277	428,173	484,060	329,307	296,261
WESTERN AUSTRALIA—						
Wheaten	165,153	117,149	153,441	104,798	108,378	76,625
Oaten	204,610	126,093	137,606	138,706	130,194	106,004
Lucerne .. ..	..	104	75	128	136	125
Other	38,513	39,268	37,607	37,778	38,781	46,418
Total	408,276	282,614	328,729	281,410	277,489	229,172
TASMANIA—						
Wheaten	979	3,879	3,719	4,779	3,607	3,032
Oaten	64,310	69,002	65,651	70,988	60,538	38,184
Lucerne	3	663	475	499	628	602
Other	14,667	25,739	26,167	23,492	39,241	42,536
Total	79,959	99,283	96,012	99,758	104,014	84,354

(a) Includes barley and rye hay.

For all States and the Australian Capital Territory combined the proportions of the areas sown to the principal kinds of hay in 1947-48 were 44 per cent. for oats, 37 per cent. for wheaten, 11 per cent. for lucerne, and 18 per cent. for other hay. In that year, oats hay predominated in the States of Victoria, South Australia and Western Australia, wheaten hay in New South Wales, and lucerne in Queensland.

2. **Value of Hay Crop.**—The following table shows the value, and the value per acre, of the hay crop of the several States for the seasons 1946-47 and 1947-48 :—

HAY : VALUE OF CROP, 1946-47 and 1947-48.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1946-47—								
Aggregate value	£ 3,065,430	4,122,770	1,286,607	1,198,395	874,432	1,016,300	22,200	11,586,134
Value per acre	£5/12/2	£6/1/8	£18/19/9	£3/12/9	£3/3/0	£9/15/5	£7/9/4	£5/15/6
1947-48—								
Aggregate value	£ 7,059,990	5,303,943	1,405,612	1,523,014	890,448	874,060	38,625	17,095,692
Value per acre	£11/4/11	£8/1/5	£19/11/4	£5/2/10	£3/17/8	£10/7/3	£10/5/2	£8/13/6

3. **Farm Stocks of Hay.**—Details of stocks of hay held on farms are now collected at the annual census of farm production. Particulars of stocks so held at 31st March in each year 1944 to 1948 are given in the table below.

STOCKS OF HAY HELD ON FARMS.

(Tons.)

31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1944 ..	522,294	859,302	107,375	403,002	140,494	89,010	2,246	2,123,723
1945 ..	189,986	460,369	71,162	200,790	184,321	82,736	606	1,189,970
1946 ..	504,521	1,026,581	86,722	307,494	156,841	78,414	2,123	2,162,606
1947 ..	226,926	1,019,728	58,507	388,993	156,908	113,740	950	1,965,752
1948 ..	825,821	1,059,842	96,158	478,142	164,425	95,147	3,676	2,723,211

The decrease in stocks at 31st March, 1945 resulted from the disastrous drought which occurred during 1944-45.

4. **Imports and Exports.**—Under normal conditions hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not figure largely amongst the imports and exports of Australia. During 1947-48, 9 tons were imported, while the exports amounted to 4,249 tons, valued at £49,458.

§ 14. Green Fodder.

1. **Nature and Extent.**—Considerable areas are devoted to the growing of green fodder, mainly in connexion with the dairying industry. These crops may be cut for feeding to live stock as green fodder or may be fed off to stock as green forage. Included with the latter are areas which may have been sown with the intention of harvesting for grain, but which, due to adverse seasonal conditions, showed no promise of producing grain or even hay and were fed off to live stock. The principal crops cut for green fodder are oats, wheat and lucerne, while small quantities of barley, sorghum, maize, rye and sugar-cane also are so used. In 1917-18 the area under green fodder (1,705,321 acres) consisted of oats (868,026 acres), lucerne (192,426 acres), wheat (112,779 acres), sorghum (76,668 acres), maize (57,061 acres), barley (49,433 acres), rye (22,457 acres), sugar-cane (4,510 acres) and other crops (321,961 acres). Particulars concerning the area of green fodder in the several States during each of the years 1943-44 to 1947-48 are given in the following table together with the average for the periods of ten years ended 1938-39 and 1947-48 :—

GREEN FODDER : AREA.

(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Average 1929-30 to 1938-39	482,989	120,355	347,804	106,820	189,332	24,255	656	1,272,211
1943-44	782,265	112,880	600,181	269,645	446,803	51,592	1,430	2,204,802
1944-45	647,187	73,159	622,268	262,394	388,466	48,087	1,679	2,043,240
1945-46	541,810	63,311	581,905	189,882	288,206	138,540	2,094	1,805,748
1946-47	462,894	49,059	543,030	121,800	319,181	103,607	2,091	1,602,262
1947-48	488,028	46,100	511,115	141,452	400,100	116,482	2,044	1,705,321
Average 1938-39 to 1947-48	541,338	83,074	510,249	208,488	330,215	52,221	1,204	1,726,789

2. **Value of Green Fodder Crops.**—The value of these crops is variously estimated in the several States, and the Australian total for the season 1947-48, excluding Western Australia, may be taken approximately as £3,518,000.

§ 15. Sugar-cane and Sugar-beet.

1. **Sugar-cane.**—(i) *Area.* Sugar-cane for sugar-making purposes is grown only in Queensland and New South Wales, and much more extensively in the former than in the latter State. Thus, of a total area of 344,914 acres of sugar-cane grown for this purpose in Australia for the season 1947-48, there were 328,486 acres or about 95 per cent. in Queensland. This latter area is made up of 215,378 acres cut for crushing, 14,705 acres cut for plants, and 93,403 acres left to stand-over or young cane on areas not ready for cutting. Sugar-cane growing appears to have commenced in Australia in or about 1862, as the earliest statistical record of sugar-cane as a crop is that which credits Queensland with an area of 20 acres for the season 1862-63. In the following season the New South Wales returns show an area of 2 acres of this crop. The area of cane in New South Wales reached its maximum in 1895-96 with a total of 32,927 acres. Thenceforward, with slight variations, it fell gradually to 10,490 acres in 1918-19, but from that year it expanded until 1924-25, when about 20,000 acres were planted. Since 1924-25, the area has fluctuated between 15,000 acres and 21,000 acres, the average for the ten seasons ended 1947-48 amounting to 17,781 acres. In Queensland, although fluctuations in area are manifest, the general trend has been upwards, but, because of the contingencies arising from war, the area under sugar in that State has been lower since 1940-41, but an increase of over 6 per cent. occurred in 1947-48. In 1939-40 Queensland's acreage under cane reached its highest level, namely, 353,996 acres. The area of sugar-cane in Australia for the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table:—

SUGAR-CANE : AREA.
(Acres.)

Season.	New South Wales.			Queensland.			Australia.			
	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Area crushed.	Area of stand-over and newly-planted cane.	Area cut for plants.	Total.
Average 1920-30 to 1938-39 ..	9,106	9,023	140	229,327	75,409	9,368	238,433	84,432	9,508	332,373
1943-44 ..	8,240	7,092	281	220,932	86,312	13,563	229,172	93,404	13,844	336,420
1944-45 ..	6,771	6,702	270	219,652	80,177	12,406	226,423	86,879	12,676	325,978
1945-46 ..	5,943	8,860	263	220,736	80,007	12,151	235,679	88,867	12,414	336,060
1946-47 ..	7,503	8,283	341	219,394	75,507	13,305	226,957	83,790	13,646	324,393
1947-48 ..	7,113	8,955	360	215,378	98,403	14,705	222,491	107,358	15,065	344,914
Average 1938-39 to 1947-48 ..	8,499	9,013	269	235,975	80,483	12,269	244,474	89,496	12,538	346,508

(ii) *Productive and Unproductive Cane.* The areas shown in the preceding table do not include the small acreage cut for green fodder, which in Queensland in 1947-48 amounted to 4,030 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and "stand-over" cane as well as a small quantity required for plants. Thus the season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing.

(iii) *Production of Cane and Sugar.* For Queensland, statistics of the production of sugar-cane are not available prior to the season 1897-98. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 6,313,369 tons in 1939-40.

The average production of cane during the ten seasons ended 1947-48 was 4,881,037 tons, and of raw sugar 690,790 tons. Particulars of the total production of cane and sugar for the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are as follows :—

SUGAR-CANE ; PRODUCTION OF CANE AND SUGAR.

(Tons.)

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.	Cane.	Sugar.	Cane.	Sugar.
Average 1929-30 to 1938-39	241,402	30,317	4,461,988	626,789	4,703,390	657,106
1943-44	290,354	37,442	3,397,017	400,423	3,687,081	523,865
1944-45	200,050	26,423	4,398,268	643,520	4,598,318	669,943
1945-46	166,069	21,220	4,551,971	644,661	4,718,040	665,881
1946-47	309,605	39,768	3,717,330	512,086	4,026,935	551,854
1947-48	267,261	33,560	4,150,986	571,694	4,418,247	605,254
Average 1938-39 to 1947-48	288,459	38,004	4,592,578	658,786	4,881,037	690,790

The production of raw sugar in Australia in 1947-48 amounted to 605,254 tons manufactured from 4,418,247 tons of cane, the maximum production for earlier years being 928,676 tons recorded in 1939-40. This decline in production arose from war-time contingencies such as labour shortage and insufficient fertilizers. In addition, variations in seasonal conditions were contributing factors. There was a remarkable recovery in sugar production in 1948-49, the record quantity of 942,899 tons of raw sugar (94 net titre) being crushed from 6,707,530 tons of cane.

Official annual data are not available regarding the total number engaged in the sugar industry in Queensland, other than the number of separate holdings growing cane (0,424 in 1947-48) and of employees in sugar mills (4,762 in 1947-48).

According to data obtained from the population census of 30th June, 1947, the number of persons engaged in the sugar-cane industry in New South Wales and Queensland was as follows :—

SUGAR-CANE : NUMBER OF PERSONS ENGAGED IN GROWING AND HARVESTING, CENSUS, 30th JUNE, 1947.

Particulars.	New South Wales.		Queensland.		Total Persons.
	Males.	Females.	Males.	Females.	
Employer	59	12	2,289	161	2,521
Self-Employer	274	5	4,199	71	4,549
Employee (on Wages or Salary)	697	2	6,921	28	7,648
Other (including not stated)	52	1	1,298	7	1,358
Total	1,082	20	14,707	267	16,076

(iv) *Average Production of Cane Sugar.* Owing to climatic variation, comparison between the average yields of cane per productive acre in Queensland and New South Wales cannot be accurately made except on an annual basis. In New South Wales the crop matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 14 months is sufficient. Allowing for the disparity in maturing periods the average annual yields of cane per productive acre during the ten years ended 1947-48 were 18.51 tons for New South Wales, and 17.96 tons for Queensland. Similarly, the yields of sugar

per acre crushed for the same period were estimated at 2.44 tons and 2.58 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1947-48 were 19.97 tons and 2.85 tons respectively, as compared with 19.73 tons and 2.76 tons for the decennium ended 1938-39.

SUGAR-CANE AND SUGAR : YIELD PER ACRE.

(Tons.)

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
Average 1929-30 to 1938-39..	26.51	3.33	7.96	19.46	2.73	7.13	19.73	2.76	7.15
1943-44 ..	35.24	4.54	7.76	15.38	2.21	6.99	16.09	2.29	7.04
1944-45 ..	29.55	3.90	7.57	20.02	2.93	6.83	20.31	2.96	6.86
1945-46 ..	27.94	3.57	7.83	19.81	2.81	7.06	20.02	2.83	7.09
1946-47 ..	40.94	5.26	7.79	16.94	2.33	7.26	17.74	2.43	7.30
1947-48 ..	37.57	4.72	7.96	19.27	2.65	7.26	19.86	2.72	7.30
Average 1938-39 to 1947-48..	33.94	4.47	7.59	19.46	2.79	6.97	19.97	2.85	7.01

(v) *Quality of Cane.* The quantity of cane required to produce a ton of sugar varies with the variety planted, the district and the season. For the ten years ended 1947-48 it required on the average 7.01 tons of cane to produce 1 ton of sugar, or 14.27 per cent. of its total weight, as compared with 7.15 tons for the ten years ended 1938-39. As the result of the systematic study of cane culture in Queensland and improvements in field and mill methods the sugar content of the cane has been considerably increased, and in 1937-38 only 6.78 tons of cane were required to produce one ton of sugar. It is believed that this is the highest sugar content obtained anywhere in the world.

The Bureau of Sugar Experiment Stations in Queensland is rendering useful service to the sugar industry by advocating and demonstrating better methods of cultivation, the more scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

(vi) *Production and Utilization.* Details of the production and utilization of raw sugar for the three years ended 1938-39 and each year 1946-47 to 1948-49 are shown below. It should be noted that the details of sugar production refer to the annual periods shown, without regard to the season in which the sugar was produced; they include beet sugar. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

RAW SUGAR : PRODUCTION AND UTILIZATION, AUSTRALIA.

Year.	Changes in Stock.	Production—Raw.	Exports. (a)	Miscellaneous Uses. (b)	Consumption in Australia (a)	
					Total (c)	Per Head. (c)
	'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average 1936-37 to 1938-39	779.3	453.3	11.2	326.6	106.5
1946-47	521.0	153.6	21.3	389.0	115.9
1947-48	633.2	140.3	22.1	427.9	125.4
1948-49	897.3	461.0	19.5	409.5	117.6

(a) Includes sugar content of manufactured products in refining.

(c) In terms of refined sugar.

(b) Includes industrial uses and losses.

(vii) *Consumption in Factories.* The quantity of sugar used in factories during 1938-39 and each of the years 1943-44 to 1947-48 is shown in the following table, the figures including, where necessary, estimates of consumption based on the sugar content of the finished product. Particulars of sugar used in establishments not classified as factories are not available, and consequently the quantities shown below are deficient to that extent.

SUGAR : CONSUMPTION IN FACTORIES, AUSTRALIA.
(Tons.)

Factories.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Aerated Waters and Cordials	11,810	24,593	25,757	26,509	28,394	27,508
Bacon	267	357	367	310	342	344
Biscuits and Bakeries, including Cakes and Pastry ..	18,801	26,648	25,959	25,538	28,486	28,684
Breweries	16,733	20,132	20,404	21,081	23,966	23,339
Cereal Foods	1,287	1,422	1,413	1,112	1,154	1,140
Condensed and Concentrated Milk	6,889	12,973	13,611	15,922	17,664	19,620
Confectionery, Ice Cream, etc.	26,926	38,979	39,193	41,493	49,703	47,305
Jams, Jellies and Preserved Fruit(a)	40,537	71,610	67,625	70,026	74,546	88,686
Other(b)	633	944	1,007	4,271	3,175	4,593
Total (c)	123,883	197,658	195,336	206,262	227,430	241,219

(a) Includes Condiments, Pickles, etc. (b) Includes sugar consumed in the industrial and heavy chemicals and dehydrated fruit and vegetables industries. (c) Excludes raw sugar used in wineries and distilleries, details of which are not available for publication.

(viii) *Control of Cane Production in Queensland.* Agreements between the Commonwealth and Queensland Governments have fixed the price of sugar in Australia from time to time. Under the latest agreement, the wholesale price of refined sugar in each of the capital cities was fixed at £33 4s. per ton (4d. per lb. retail) for the five years ended 1951. On the 3rd December, 1947, the wholesale price fixed under this agreement was increased to £37 6s. 8d. per ton (4½d. per lb. retail).* The net proceeds of all sugar sold in Australia and sugar sold abroad are pooled and a uniform price per ton is paid to the mills. This pooling is made possible by the acquisition by the Queensland Government of all sugar produced in the State, under legislation which has been in force since 1915. The small New South Wales production (about 5 per cent. of the whole) is also acquired by the Queensland Government by private agreement.

Sugar production, which in 1923 had scarcely been sufficient to cover Australian requirements, grew very rapidly in subsequent years. In 1925 the Queensland Government took steps to prevent, as a general rule, new land from being opened up for cane production. During that year 56 per cent. of the sugar production was consumed in Australia and 44 per cent. exported. After 1925, production remained stable for some years. In 1929 the operations of the pool, which had hitherto received at a uniform price all sugar offered it by the mills, were re-organized. After 1920, mills received the full pool price for sugar up to the amount of their previous maximum production only. Any further supplies were acquired at export price only.

Between 1929 and 1939 the export price was generally less than half the pool price. In spite of this, production increased by 72 per cent. during that period. In 1939, in view of the fact that the International Sugar Agreement imposed certain restrictions on the volume of Australian exports, the Queensland Parliament passed further legislation limiting the pool to 737,000 tons in respect of production in Queensland. Any production in excess of this was to be acquired at a penalty price. This tonnage was divided up in quotas between the mills, on the understanding that the mills would allocate quotas of production to individual farmers. Proclamations issued by the Queensland Government, however, permitted the harvesting of the whole of the crops for the seasons 1939 to 1948. In 1948 the pool was limited to 874,000 tons.

* See p. 991 for later increase.

2. **Sugar-beet.**—Victoria is the only State growing beet for sugar, although 5 tons of sugar-beet were produced from 1 acre in Tasmania during 1942-43. Particulars of acreage and production for Victoria for the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table:—

SUGAR-BEET : AREA AND PRODUCTION, VICTORIA.

Particulars.		Average 1929-30 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	Average 1938-39 to 1947-48.
Area sown	.. acres	3,312	836	485	108	753	553	1,865
Production	.. tons	36,694	6,975	3,200	975	9,170	6,362	14,061
Average yield per acre	.. "	11.08	8.34	6.60	9.03	12.18	11.50	7.54
Sugar produced	.. "	4,642	704	..	..	1,014	584	1,679

During the 1939-45 War the area under sugar-beet declined steadily from 4,268 acres in 1938-39 to 108 acres in 1945-46 but increased to 753 acres in 1946-47. There was a further decline to 553 acres in 1947-48. Much of this decline was due to the diversion, as a war-time measure, of many areas to the production of vegetables. The mill at Maffra ceased operations at the end of 1943 but re-opened to treat the 1946-47 crop.

3. **Sugar Bounties.**—Reference is made to the various Acts in connexion with sugar bounties and sugar excise tariffs in early issues of the Official Year Book. (See No. 6 pp. 394-6.)

4. **Sugar Purchase by Commonwealth Government.**—The steps taken by the Commonwealth Government in connexion with this matter are also referred to in the Official Year Book. (See No. 18, p. 720.)

5. **Sugar Agreement in Australia—Embargo on imports, etc.**—Reference was made in Official Year Book No. 37 (pp. 940, 941) to the agreement operating between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly the agreement places an embargo on sugar importations and fixes the price of sugar consumed in Australia. The agreement at present covers the period up to 31st August, 1951.

6. **International Sugar Agreement.**—Delegates of 21 Nations representing 90 per cent. of producers met in London and entered into an agreement on 6th May, 1937, providing for the regulation of the production and marketing of sugar in the world during a period of five years from 1st September, 1937. The object of the agreement was to ensure an adequate supply of sugar at a price not exceeding the cost of production, including a reasonable profit to efficient producers. For this purpose, each exporting country was given a basic annual export quota which would be increased in proportion to any expansion in sugar consumption. By this means and by limitations on stocks and measures to encourage more consumption it was hoped that the International Sugar Council, which was established to administer the agreement would be able to hold in proper balance the supplies and requirements of sugar. The export quota originally allotted to Australia was 400,000 long tons. This figure could be increased, however, where the delivery from any British Colony fell short of its quota. In such circumstances, the deficiency could be allocated among other producing countries of the Empire including Australia.

This agreement, which normally would have expired on 31st August, 1942, has proved of great benefit to Australia. In 1943, fourteen of the original 21 Nations signed a protocol continuing the agreement for another two years ending 31st August, 1944. Six further protocols have since been signed, each extending the agreement for a period of one year, the last protocol extending the agreement to 31st August, 1950. The first protocol, signed in 1943 continued the agreement unchanged, while the later protocols

contained two new provisions. The first of these provisions was that during the period of the extension, the quotas fixed in the agreement should be inoperative. The second provision was that the signatories of the protocols recognized that revision of the agreement was necessary and should be undertaken when the time appeared opportune.

7. **Net Return for Sugar Crop.**—Calculations by the Sugar Board regarding the disposal of the crop, net value of exports and the average price realized during each of the years 1938-39 and 1943-44 to 1947-48 will be found in the following table :—

SUGAR : NET RETURNS, AUSTRALIA.

Year	Percentage Exported. (a)	Net Value of Exports per Ton. (a)	Average Price per ton for Whole Crop. (a)	Estimated Value of Crop.
	Per cent.	£ s. d.	£ s. d.	£
1938-39	55.78	8 4 3	15 3 11	12,806,376
1943-44	17.12	13 2 6	20 18 4	12,554,579
1944-45	32.19	15 0 6	19 16 3	12,417,262
1945-46	31.53	16 17 9	20 6 5	13,674,661
1946-47	16.02	21 10 0	21 16 9	12,326,952
1947-48	17.61	29 12 6	24 19 9	14,879,144

(a) As supplied by the Queensland Sugar Board.

The estimated value of the raw sugar produced has been taken from the audited accounts of the Queensland Sugar Board. The values stated represent the gross receipts from sales in Australia and overseas less refining costs, freight, administrative charges, etc., and export charges, but not deducting concessions to the fruit industry and other rebates which in 1947-48 amounted to £216,000. The value thus obtained represents the net market value of all raw sugar sold, which, since 1933, has been divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively. Prior to that year the distribution was about two-thirds to the grower and one-third to the miller.

8. **Imports and Exports of Sugar.**—Particulars showing the imports and exports of cane sugar for the five years ended 1938-39 and each year 1943-44 to 1947-48 are as follows :—

SUGAR : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
Average 1934-35 to 1938-39	23	505	377,930	3,480,632	377,907	3,480,127
1943-44	95,826	1,523,786	95,826	1,523,786
1944-45	4	114,011	1,853,628	114,011	1,853,624
1945-46	3	150,972	3,059,599	150,972	3,059,596
1946-47	23	117,379	2,717,252	117,379	2,717,229
1947-48	21	100,351	3,062,450	100,351	3,062,429

9. **Sugar By-products.**—Large quantities of molasses are produced as a by-product in the sugar mills. Details for a series of years of the quantities produced and the amounts used for distilling, fuel, manure and other purposes will be found in Chapter XXIV. "Manufacturing Industry".

Boards are now being made from the residuum of crushed fibre after the removal of the sugar content from sugar-cane. These boards are used in the building industry for walls and ceilings and possess high insulating and sound-absorbing properties.

10. **Sugar Prices.**—The prices of sugar in Australia are shown in the following table.

SUGAR : PRICES IN AUSTRALIA.

Year.	Raw Sugar, 94 Net Titre.			Refined Sugar.		
	Average Return per Ton received by millers and growers for—			Date of Determination.	Wholesale Price per ton.	Retail Price per lb.
	Home Consumption.	Exports. (a)	Whole Crop. (a)			
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
1931 ..	26 19 0	9 7 0	18 2 11	19.7.15 to 15.1.16	25 10 0	3
1932 ..	25 2 3	8 5 9	18 17 9	16.1.16 to 30.6.17	29 5 0	3½
1933 ..	23 18 6	8 0 6	16 6 3	1.7.17 to 24.3.20	29 5 0	3½
1934 ..	24 0 0	7 11 3	15 13 9	25.3.20 to 30.6.20	49 0 0	6
1935 ..	24 0 0	7 18 9	16 5 11	1.7.20 to 31.10.22	49 0 0	6
1936 ..	24 2 0	7 19 0	15 7 4	1.11.22 to 30.6.23	42 0 0	5
1937 ..	24 0 0	8 6 0	15 7 6	1.7.23 to 21.10.23	42 0 0	5
1938 ..	24 0 0	8 4 3	15 3 11	22.10.23 to 31.8.25	37 11 4	4½
1939 ..	23 12 6	10 7 6	15 17 7	1.9.25 to 31.8.31..	37 6 8	4½
1940 ..	23 1 0	11 5 6	17 2 11	1.9.31 to 4.1.33 ..	37 6 8	4½
1941 ..	22 13 0	10 18 9	17 18 11	5.1.33 to 31.8.36..	33 4 0	4
1942 ..	22 14 6	10 16 3	18 18 5	1.9.36 to 31.8.41..	33 4 0	4
1943 ..	22 10 6	13 2 6	20 18 4	1.9.41 to 31.8.46..	33 4 0	4
1944 ..	22 2 0	15 0 6	19 16 3	1.9.46 to 3.12.47	33 4 0	4
1945 ..	21 18 0	16 17 9	20 6 5	4.12.47 to 28.10.49	37 6 8	4½
1946 ..	21 18 0	21 10 0	21 16 9	29.10.49 to 31.8.51	41 9 4	5
1947 ..	24 0 0	29 12 6	24 19 9			
1948 ..	23 1 0	28 2 0	25 8 6			

(a) Including "Excess" Sugar.

11. **War and Post-war Arrangements.**—After the outbreak of war in September, 1939, the British Ministry of Food concluded arrangements with the Queensland Government for the purchase of Australia's surplus production of raw sugar for the season 1939. The price was fixed at £Stg. 7 10s. per ton at United Kingdom ports plus the preference on dominion sugar of £Stg. 3 15s. per ton under the existing tariff.

Similar agreements were negotiated for the disposal of the surplus raw sugar in subsequent seasons, the price in sterling currency per ton c.i.f. United Kingdom ports, basic 96° polarization being as follows :—1940 and 1941, £12 12s. 6d.; 1942, £13 15s.; 1943, £14 5s.; 1944, £15 5s. and 1945, £17 5s., inclusive of the existing preference of £3 15s. From the 1st January, 1946 the price was further increased by £Stg. 2 5s. per ton and the United Kingdom agreed to absorb an additional 12s. 6d. per ton on the freight cost. The price was further increased to £stg. 24 5s. per ton from 1st January, 1947 and to £stg. 27 5s. per ton from 1st January, 1948.

The United Kingdom is to continue the bulk purchase of exportable sugar from Dominions and Colonies up to and including 1952.

§ 16. Vineyards.

1. **Progress of Cultivation.**—(i) *Area of Vineyards.* The date of introduction of the vine into Australia has been variously set down by different investigators, the years 1815 and 1828 being principally favoured. It would seem, however, that plants were brought out with the first fleet in 1788, consequently the Australian vine is as old as Australian settlement. A report by Governor Hunter gives the area of vines in 1797 as 8 acres. From New South Wales the cultivation spread to Victoria and South Australia, and these States have now far outstripped New South Wales in the area of this crop. In

Western Australia an expansion of area under vineyards has occurred in recent years, but in Queensland, where vine-growing has been carried on for many years, little progress has been made. The purposes for which grapes are grown in Australia are (a) for wine-making, (b) for table use, and (c) for drying. The total area of vines in the several States during each of the years 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table:—

VINEYARDS : AREA.

(Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	A.C.T.	Australia.
Average 1929-30 to 1938-39 ..	15,777	40,563	2,142	54,156	5,666	..	118,304
1943-44 ..	16,001	42,711	2,998	57,261	10,240	2	129,213
1944-45 ..	15,891	42,914	3,032	56,925	10,117	2	128,881
1945-46 ..	15,983	42,843	3,003	57,440	9,583	3	128,855
1946-47 ..	16,338	42,948	2,945	58,221	9,857	3	130,312
1947-48 ..	16,541	43,784	3,087	58,885	10,025	9	132,331
Average 1938-39 to 1947-48 ..	16,394	42,865	3,041	57,963	9,053	3	129,319

The total area of vines in Australia has shown a substantial expansion since 1860. This development has been interrupted periodically, decreases occurring in 1896, in the years between 1904 and 1910, and in 1914. Since the latter year the area increased without interruption from about 61,000 acres to more than 114,000 acres in 1924-25, due largely to the planting of varieties suitable for drying. Subsequently the area fluctuated around 114,000 acres but commenced to increase again in 1933-34. Since then the expansion has continued, with minor interruptions, and the record area of 132,331 acres was reached in 1947-48. A slight decline occurred in each of the years 1943-44 to 1945-46, the acreage in the latter year being 128,855 acres.

(ii) *Report on the Wine Industry.* An investigation into conditions in the wine industry was undertaken by the Commonwealth Director of Development and the Senior Inspector of Excise, Department of Trade and Customs, and a comprehensive report was presented to Parliament on the 17th July, 1931.

During 1944 the Minister for Trade and Customs referred a number of matters to the Tariff Board for inquiry and report. Subsequently four reports were issued during 1944-45 which dealt with the following subjects, viz. :—Use of cane sugar in sauterne, spirit for fortification of wine, prices for grapes and fortifying spirit and control of liquor order.

(iii) *Wine Production, Bounties, etc.* The production of wine has not increased as rapidly as the suitability of soil and climate would appear to warrant. Production for the ten years ended 1947-48 averaged 20.9 million gallons compared with 16.3 million gallons produced during the ten years ended 1938-39. This seems to arise from two causes. In the first place, Australians are not a wine-drinking people; it is estimated that prior to the 1939-45 War they consumed approximately 4.1 million gallons only, or 0.6 gallons per head per annum, and while this had risen to 10,467,000 gallons (1.37 gallons per head of population) in 1947-48, the local market is nevertheless restricted. Secondly, the comparatively new and unknown wines of Australia must compete in the markets of the old world with the well-known and long-established brands from other countries. Continued efforts are being made to bring the Australian wines under notice both here and abroad and with the assistance of a Commonwealth bounty on the export of fortified wine of specified strength, the industry has been greatly stimulated. Further development, however, was interrupted by the war. The loss of the United Kingdom

market due to the lack of shipping space placed the wine industry of Australia in a most difficult position, but this was partly offset by the increase in local consumption due to the availability of supplies, the restriction on the production of beer and the presence of large numbers of defence personnel.

Particulars of the Wine Export Bounty are shown in § 20 hereafter. The Wine Export Bounty Act 1930 which provided for payment at the rate of 1s. 9d. per gallon was replaced in 1934 by a new Act which fixed the rate at 1s. 3d. per gallon for the two years ending 28th February, 1937, and thereafter at a reduction of 1d. per gallon for each succeeding year until 1940. The payment of a bounty at the rate of 1s. per gallon for a period of five years to 28th February, 1945, subsequently extended to 28th February, 1947, was provided for under the Wine Export Bounty Act of 1939-1944. This Act was repealed by the Wine Export Bounty Act 1947 which made provision for payment of bounty, subject to certain conditions, on wine sold overseas prior to 30th October, 1946 and exported after 28th February, 1947.

The quantity of wine produced in the several States during the 1943-44 to 1947-48 seasons, together with the averages for the ten-year periods ended 1938-39 and 1947-48, is shown in the following table :—

WINE : PRODUCTION.

('000 Gallons.)

Season.	N.S.W.	Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
Average 1929-30 to 1938-39 ..	2,099	1,449	36	12,349	397	16,330
1943-44 ..	3,530	1,320	27	14,435	553	19,865
1944-45 ..	2,579	785	22	10,573	460	14,419
1945-46 ..	2,968	1,916	35	20,213	726	25,858
1946-47 ..	3,905	3,082	30	25,422	751	33,190
1947-48 ..	4,500	2,958	28	26,000	673	34,159
Average 1938-39 to 1947-48 ..	3,114	1,576	33	15,657	533	20,913

2. Imports and Exports of Wine.—(i) *Imports.* The principal countries of origin of wine imported into Australia were, before the 1939-45 War, France, Spain, Portugal and Italy, the bulk of the sparkling wines coming from France. The bulk of the post-war wine imports have been obtained from France. The imports for the five years ended 1947-48 compared with average imports for the years 1934-35 to 1938-39 are shown hereunder :—

WINE : IMPORTS INTO AUSTRALIA.

Year.	Quantity (Gallons).			Value (£).		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
Average 1934-35 to 1938-39 ..	8,119	28,566	36,685	20,245	19,332	39,577
1943-44 ..	..	755	755	..	1,200	1,200
1944-45 ..	100	..	100	132	..	132
1945-46 ..	40	479	519	213	1,433	1,646
1946-47 ..	1,719	1,585	3,304	7,909	3,041	10,950
1947-48 ..	14,768	4,158	18,926	54,098	8,282	62,380

(ii) *Exports.* Before the 1939-45 War practically all wine exported was sent to the United Kingdom, only 200,000 gallons (approximately) being sent elsewhere. Exports in 1947-48 totalled 2,688,366 gallons, of which the United Kingdom received 2,157,056 gallons; New Zealand, 265,557 gallons; Canada, 135,816 gallons; Japan, 24,479 gallons; and other countries 102,458 gallons.

Exports for the five years ended 1947-48 are shown in the following table in comparison with average exports during the five years ended 1938-39 :—

WINE : EXPORTS FROM AUSTRALIA.

Year.	Quantity (Gallons).			Value. (£)		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
Average 1934-35 to 1938-39 ..	3,772	3,559,094	3,562,866	5,400	938,195	943,595
1943-44 ..	10,306	1,235,095	1,245,401	6,966	415,966	422,932
1944-45 ..	6,254	1,544,714	1,550,968	7,735	587,563	595,298
1945-46 ..	7,984	1,776,452	1,784,436	10,619	729,969	740,588
1946-47 ..	3,244	2,717,355	2,720,599	4,975	1,176,626	1,181,601
1947-48 ..	5,935	2,682,431	2,688,366	8,071	1,421,861	1,429,932

3. *Overseas Marketing of Wine.*—(i) *The Wine Overseas Marketing Act 1929-1945.* This Act was introduced at the request of the viticultural interests in Australia with the object of placing the overseas marketing of Australia's surplus wine on an orderly basis. The Wine Overseas Marketing Board was appointed to supervise the exports, and the sale and distribution after export, of Australian wine.

The name of the Board was changed to the Australian Wine Board in 1936. An amendment to the Act in 1945 made provision for eleven members on the Board, comprising five representatives of proprietary and privately-owned wineries and distilleries, two representatives of co-operative wineries and distilleries, three representatives of grape-growers supplying to wineries and distilleries, and one representative of the Commonwealth Government. No wine may be exported except by means of a licence which is issued under conditions recommended to the Minister by the Board; these include the withholding of shipments as directed by the Board. The Board has a London agency which advises on marketing conditions. The methods of marketing adopted by the Board have resulted in the widening of the distribution of Australian wines overseas.

(ii) *The Wine Grapes Charges Act 1929-1941.* This Act provides for the imposition of a levy on all grapes used in Australia for the manufacture of wines or spirit used for fortifying wine. The proceeds of the levy are used to defray the administrative and other expenses of the Board, and provision is made for such exemptions from the levy as the Board may recommend.

4. *Other Viticultural Products.*—(i) *Table Grapes.* Grapes for table use are grown in all the States except Tasmania, but the area cultivated to this variety is only about 7 per cent. of the productive area of grapes. The greatest development in the industry

has taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes grown during the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are as follows :—

TABLE GRAPES : PRODUCTION.

(Tons.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Australia.
Average 1929-30 to 1938-39	4,354	3,884	2,060	738	2,874	13,910
1943-44	5,325	4,067	2,696	1,150	3,240	16,478
1944-45	4,363	5,255	2,237	917	2,903	15,675
1945-46	4,817	4,133	3,120	1,036	2,342	15,448
1946-47	4,682	3,537	2,669	1,314	2,436	14,638
1947-48	4,835	4,328	2,851	660	2,320	14,994
Average 1938-39 to 1947-48	4,666	4,155	2,636	1,106	2,693	15,256

(ii) *Raisins and Currants.* The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1943-44 to 1947-48 and the averages for the ten-year periods ended 1938-39 and 1947-48 are shown in the following table. The production of 103,410 tons for the 1943-44 season represents the greatest output recorded in any year. Due to adverse seasonal conditions, heavy crop losses occurred during the three succeeding years. Production in 1944-45 amounted to 68,857 tons, in 1945-46 to 73,840 tons and in 1946-47 to 65,197 tons. In 1947-48 it rose to 84,828 tons.

RAISINS(a) AND CURRANTS : PRODUCTION.

(Tons.)

Season.	N. S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
Average 1929-30 to 1938-39	4,234	796	35,235	7,995	11,494	8,007	697	1,789	51,660	18,587
1943-44	7,719	1,488	48,851	9,987	20,739	10,457	835	3,334	78,144	25,266
1944-45	5,053	1,064	33,076	6,858	12,344	6,896	674	2,892	51,147	17,710
1945-46	6,859	922	42,995	6,435	8,819	4,467	815	2,528	59,488	14,352
1946-47	5,523	814	37,215	6,088	8,246	2,797	719	3,795	51,703	13,494
1947-48	6,944	1,079	47,160	8,086	11,358	6,682	544	2,975	66,006	18,822
Average 1938-39 to 1947-48	6,587	1,192	42,559	8,238	13,482	7,612	668	2,848	63,296	19,890

(a) Sultanas and lexias.

5. *Production and Disposal of Dried Vine Fruit.*—As the production of dried vine fruit is far in excess of Australia's requirements, considerable quantities are available for export overseas. Details of the quantities disposed of in Australia and overseas are given in the table below. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

DRIED VINE FRUIT : QUANTITIES DISPOSED OF, AUSTRALIA.

(Tons.)

Season ended December—	Australian Consumption.	Overseas.					Grand Total.
		United Kingdom.	Canada.	New Zealand.	Other Countries.	Total.	
1943	25,204	42,810	15,830	5,770	761	65,171	90,375
1944	35,071	44,570	16,000	6,756	1,820	69,146	104,217
1945	24,445	21,500	15,000	5,548	1,569	43,617	68,032
1946	20,549	32,000	14,000	5,000	844	51,844	72,393
1947	19,015	21,300	10,988	4,443	612	37,343	56,358
1948	25,999	28,542	18,274	6,167	1,649	54,632	80,631
1949	24,676	11,978	14,073	4,650	1,045	31,746	56,422

Source : Commonwealth Dried Fruits Control Board.

6. **Exports of Raisins and Currants.**—The following table shows the oversea exports of raisins and currants during each of the years 1943-44 to 1947-48 compared with the average for the five years ended 1938-39. As the quantities of imports were practically negligible they have been omitted.

RAISINS AND CURRANTS : EXPORTS, AUSTRALIA.

Year.	Raisins.		Currants.		Total Raisins and Currants.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
Average 1934-35 to 1938-39 ..	43,191	1,686,447	15,054	548,838	58,245	2,235,285
1943-44 ..	56,039	2,449,050	18,994	714,315	75,033	3,163,365
1944-45 ..	56,418	2,647,719	20,994	828,330	77,412	3,476,049
1945-46 ..	30,022	1,547,688	9,307	403,645	39,329	1,951,333
1946-47 ..	35,248	1,913,574	5,606	243,508	40,854	2,157,082
1947-48 ..	31,364	1,795,358	10,066	468,684	41,430	2,264,042

Since 1912 Australia has not only produced sufficient raisins and currants for home consumption but has been able to maintain a large export trade. The chief countries importing Australian raisins and currants are the United Kingdom, New Zealand and Canada, the quantities exported thereto in 1947-48 being 31,612 tons, 5,490 tons and 2,999 tons respectively. Exports to Canada increased from 4,600 tons in 1928-29 to 16,944 tons in 1939-40 and to 25,955 tons in 1944-45, but decreased to 2,999 tons in 1947-48.

7. **War-time Contract.**—At the outbreak of war in 1939 the Government of the United Kingdom purchased all available surpluses after provision had been made for Canadian and New Zealand requirements. During the 1944 and 1945 seasons prices fixed under these contracts represented a substantial increase over pre-war prices.

8. **Post-war Contract.**—A long term agreement was negotiated between the Governments of the United Kingdom and Australia for the purchase of the exportable surplus of the dried vine fruit crop for the 1946, 1947 and 1948 seasons. A further agreement has been reached between the Governments of the United Kingdom and Australia under which Australian dried vine fruits will be purchased by the United Kingdom during the years 1949 to 1953. The contract provides that the quantity of fruit to be purchased each year shall not exceed a value of £2,500,000 sterling currency on an f.o.b. basis. Export prices have been fixed for the first two years, but during the remaining three years they are to be the subject of annual agreement by the two Governments. The contract prices for currants, sultanas and lexias sold to the United Kingdom during the war years 1943 and 1945, as well as the prices fixed under the post-war contracts covering the years 1946 to 1950, are shown in the following table.

DRIED VINE FRUITS : CONTRACT PRICES PER TON TO UNITED KINGDOM.

(£A. s. d., f.o.b. Australian Ports.)

Fruit.	Grade.	1943.	1944.	1945.	1946 to 1948.	1949 and 1950.
Currants ..	1 Crown and upwards ..	37 16 3	41 11 3	43 2 6	50 0 0	60 0 0
Sultanas ..	1 Crown and upwards ..	51 5 0	55 0 0	56 11 3	65 0 0	70 0 0
Lexias ..	4 and 5 Crown ..	50 12 6	54 7 6	55 18 9	64 7 6	64 7 6

9. *Overseas Marketing of Dried Fruits.*—(i) *The Dried Fruits Export Control Act 1924-1938.* This Act was passed by the Commonwealth Parliament at the request of the dried fruits industry to organize the overseas marketing of Australian dried vine fruits. The Dried Fruits Control Board, consisting of eight members—including five growers' representatives, two members with commercial experience and one Government nominee—was appointed to control the export, and the sale and distribution after export, of Australian sultanas, currants and lexias. In conjunction with its London agency, the Board has improved the marketing of Australian dried fruits overseas, and has increased the demand for the product. Its system of appraisement has resulted in more satisfactory realizations. Its methods of ensuring continuity of supply and regulating shipments and its participation in the advertising campaign of the Australian Overseas Trade Publicity Committee have benefited the industry considerably. No dried fruits may be exported except by means of a licence, which is issued subject to conditions recommended by the Board.

(ii) *Dried Fruits Export Charges Act 1924-1929.* This Act provides for the imposition of a levy on all sultanas, currants and lexias exported from Australia for the purpose of defraying the administrative expenses of the Board and the cost of advertising, etc. The rate of the levy is fixed by regulation. Under an amendment made in 1927 provision was made for the exemption of sultanas, currants and lexias from the levy upon recommendations by the Board.

(iii) *The Dried Fruits Act 1928-1935.* In previous issues of the Official Year Book reference has been made to the Dried Fruits Act and its provisions have been outlined (see p. 894 of Official Year Book, No. 28).

§ 17. Orchards and Fruit-Gardens.

1. *Area.*—The largest area of orchards and fruit-gardens prior to the 1939-45 War was attained in 1933-34 when 281,899 acres were planted. From that year until 1942-43, when 260,384 acres were under fruit, there was a gradual decline. Since 1942-43 there has been a continuous upward movement, and the area in 1947-48 reached a new peak of 290,320 acres. The total area of orchards and fruit-gardens in the several States during the years 1943-44 to 1947-48, compared with the averages for the ten seasons 1929-30 to 1938-39 and the ten seasons 1938-39 to 1947-48, is shown in the following table:—

ORCHARDS AND FRUIT-GARDENS : AREA.

(Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	N. Terr.	A.C.T.	Australia.
Average 1929-30 to 1938- 39 ..	84,025	76,643	32,437	29,365	20,703	32,627	5	69	275,874
1943-44..	81,283	70,024	31,878	25,521	21,154	32,135	..	105	262,100
1944-45..	82,230	68,245	32,133	26,484	21,060	32,350	..	97	262,599
1945-46..	84,062	69,479	34,946	27,223	21,730	32,284	..	99	269,823
1946-47..	90,599	71,312	35,928	28,126	21,968	31,619	..	108	279,660
1947-48..	98,901	71,513	38,665	28,338	22,063	30,739	..	101	290,320
Average 1938-39 to 1947- 48 ..	85,598	70,113	33,218	28,213	21,692	31,522	11	117	270,484

2. **Varieties of Crops.**—(i) *General.* The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, papaw, mango and guava of the tropics to the strawberry, the raspberry and the currant of the colder parts of the temperate zone. In New South Wales, citrus fruits (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears and cherries are extensively grown. The principal varieties grown in Victoria are the apple, peach, pear, orange, plum and apricot. In Queensland, the banana, pineapple, apple, orange, mandarin, peach, and plum are the varieties most largely cultivated. In South Australia, in addition to the apple, orange, apricot, plum, peach and pear, the almond and the olive are extensively grown. In Western Australia, the apple, orange, lemon, pear, plum, peach, apricot and fig are the chief varieties. In Tasmania, the apple occupies over two-thirds of the fruit-growing area, but small fruits, such as the currant, raspberry and gooseberry, are extensively grown, while the balance of the area is mainly taken up with the pear, apricot and plum. The following tables show the acreage—bearing and non-bearing—of the principal kinds of fruit, and the quantity and value of fruit produced.

(ii) *Area.* The table hereunder shows the total acreage—bearing and non-bearing—for 1947-48 :—

ORCHARDS AND FRUIT-GARDENS : AREA, 1947-48.

(Acres.)

Fruit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Apples ..	14,357	21,365	6,008	8,149	13,062	21,196	62	84,199
Apricots ..	1,967	5,173	367	3,864	499	1,304	5	13,179
Bananas ..	26,381	..	9,887	..	323	..	..	36,591
Cherries ..	2,487	1,688	6	1,077	35	90	3	5,386
Citrus—								
Oranges ..	24,244	4,446	3,795	4,691	3,480	..	..	40,656
Mandarins ..	2,551	89	1,834	126	198	..	..	4,798
Lemons ..	3,816	2,004	557	417	581	..	..	7,375
Other ..	954	286	210	161	179	..	..	1,790
Nuts ..	917	841	470	3,460	335	..	5	6,028
Peaches ..	9,001	15,409	1,508	1,589	819	141	7	28,474
Pears ..	3,614	13,664	419	1,717	984	2,381	6	22,785
Pineapples ..	327	..	9,135	..	..	..	..	9,462
Plums and Prunes ..	4,789	3,473	1,241	1,831	910	328	7	12,579
Other Small Fruits ..	32	688	200	223	25	5,232	..	6,400
Other Fruits ..	3,464	2,387	3,028	1,033	633	67	6	10,618
Total ..	98,901	71,513	38,665	28,338	22,063	30,739	101	290,320

(iii) *Production.* (a) *Quantities.* The production in 1947-48 is shown in the next table :—

ORCHARDS AND FRUIT-GARDENS : PRODUCTION, 1947-48.

Fruit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Apples .. bushel	1,329,955	1,991,297	455,254	989,440	1,626,493	7,894,220	5,087	14,291,746
Apricots ..	330,800	563,771	22,386	401,784	47,831	115,320	287	1,551,191
Bananas ..	2,321,833	..	585,895	..	57,767	..	..	2,905,495
Cherries ..	95,275	57,988	175	65,871	1,639	13,700	38	234,686
Citrus—								
Oranges ..	2,962,654	720,581	256,848	900,876	377,603	..	..	5,218,562
Mandarins ..	253,218	19,892	133,204	25,119	17,084	..	..	448,577
Lemons ..	435,631	170,385	67,277	56,187	110,242	..	..	839,722
Other ..	142,635	52,608	23,030	23,429	21,761	..	..	203,463
Nuts .. lb.	339,308	219,984	99,567	1,441,440	39,523	..	256	2,140,478
Peaches .. bushel	973,178	1,619,066	85,061	180,777	66,356	28,340	195	2,962,273
Pears ..	449,916	1,854,909	30,498	101,047	123,622	600,900	203	3,239,995
Pineapples ..	20,230	..	2,073,172	..	..	..	..	2,093,702
Plums and Prunes ..	461,181	280,515	67,353	145,142	80,187	94,810	227	1,129,415
Other Small Fruits .. cwt.	858	12,023	3,724	3,364	433	175,440	..	195,842

(b) *Gross Values.* The gross value of production for the various classes of fruit for the year 1947-48 is shown in the following table:—

ORCHARDS AND FRUIT-GARDENS : GROSS VALUE OF PRODUCTION, 1947-48.

(£.)

Fruit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Apples	1,479,270	929,975	372,270	568,821	1,273,054	2,165,840	5,681	6,716,911
Apricots	443,490	274,840	22,708	354,523	47,632	46,680	380	1,190,253
Bananas	2,610,640	..	590,635	..	154,525	..	..	3,355,820
Cherries	253,380	86,982	691	127,351	7,526	13,090	103	489,123
Citrus—								
Oranges	1,897,570	475,950	179,741	693,270	297,502	..	..	3,544,033
Mandarins	169,210	15,914	104,945	20,514	14,901	..	..	325,484
Lemons	141,960	66,765	31,409	25,284	49,673	..	..	315,151
Other	67,530	27,209	10,102	12,304	13,053	..	..	130,198
Nuts	23,180	18,265	3,032	81,341	2,616	..	18	128,652
Peaches	609,090	688,103	58,551	139,410	73,361	8,860	166	1,577,541
Pears	279,750	788,336	21,759	136,790	103,533	113,290	293	1,443,751
Pineapples	11,590	..	958,366	..	..	..	..	969,956
Plums and Prunes	366,640	103,983	63,239	83,039	65,041	32,500	190	714,032
Other Small Fruits	2,630	57,855	39,634	18,857	7,256	308,980	..	435,212
Other Fruits	197,970	53,347	218,712	77,057	39,846	142,150	117	729,199
Total	8,544,900	3,578,524	2,675,874	2,278,561	2,149,719	2,831,390	6,948	22,065,916

3. *Principal Fruit Crops.*—(i) *Area.* The area in Australia of the principal fruit crops for each of the years 1943-44 to 1947-48, compared with the average for the ten seasons 1929-30 to 1938-39 and the ten seasons 1938-39 to 1947-48, is shown hereunder:—

PRINCIPAL FRUIT CROPS : AREA, BEARING AND NON-BEARING, AUSTRALIA.

(Acres.)

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
Average 1929-30 to 1938-39	100,258	11,632	23,353	50,706	23,390	20,725	15,912
1943-44	86,069	12,353	20,504	50,053	26,996	22,425	12,747
1944-45	83,968	12,300	23,564	49,534	26,464	22,569	12,352
1945-46	84,377	12,445	26,587	51,217	26,588	22,616	12,413
1946-47	83,617	13,184	30,222	52,269	28,196	23,030	12,670
1947-48	84,199	13,179	36,591	54,619	28,474	22,785	12,579
Average 1938-39 to 1947-48	88,717	12,349	24,854	49,706	26,420	22,493	12,956

(ii) *Production.* (a) *Quantities.* In the next table the production of the principal varieties of fruit grown in Australia is shown for the same periods:—

PRINCIPAL FRUIT CROPS : PRODUCTION IN AUSTRALIA.

('000 Bushels.)

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
Average 1929-30 to 1938-39	10,013	1,014	2,270	5,011	1,984	2,130	948
1943-44	14,523	1,433	2,262	5,332	2,573	2,684	1,171
1944-45	10,468	881	2,129	5,657	2,173	2,922	729
1945-46	15,267	1,107	2,621	5,249	2,095	2,644	949
1946-47	10,293	1,239	2,791	5,547	2,432	3,607	743
1947-48	14,292	1,551	2,965	6,770	2,962	3,240	1,129
Average 1938-39 to 1947-48	11,900	1,217	2,544	5,377	2,329	2,765	909

(b) *Values.* The gross value of the principal fruit crops during the periods 1943-44 to 1947-48, compared with the average for the five years 1934-35 to 1938-39, is shown in the following table:—

PRINCIPAL FRUIT CROPS : GROSS VALUE OF PRODUCTION, AUSTRALIA.
(£.)

Year.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
Average 1934-35 to 1938-39 ..	2,812,166	323,980	1,118,465	1,668,124	651,978	631,984	287,440
1943-44 ..	4,869,367	899,892	3,016,013	4,698,099	1,357,242	1,114,797	817,065
1944-45 ..	3,528,787	600,115	3,035,460	4,406,520	1,241,020	1,305,727	559,236
1945-46 ..	4,836,299	894,454	3,256,522	4,084,870	1,293,578	1,167,671	701,581
1946-47 ..	4,050,940	885,215	3,039,808	4,335,412	1,338,809	1,501,942	609,601
1947-48 ..	6,716,911	1,190,253	3,355,820	4,314,866	1,577,541	1,443,751	714,632

4. *Production of Jams and Jellies and Preserved Fruit.*—Considerable quantities of fruit are used in the production of jams and jellies and preserved fruit in Australia, details of the output of these products being shown below for the years 1938-39 and 1944-45 to 1948-49.

PRODUCTION OF JAMS AND JELLIES AND PRESERVED FRUIT : AUSTRALIA.
(‘000 lb.)

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Jams and Jellies ..	84,916	149,939	148,323	160,064	198,454	132,951
Fruit Preserved in Liquid—						
Apricots ..	12,447	6,436	11,198	12,530	21,149	22,210
Peaches ..	86,176	59,875	48,251	70,568	77,332	56,641
Pears ..	27,344	28,402	31,023	40,615	42,082	50,298
Pineapples ..	14,356	5,562	7,644	6,267	21,237	21,562
Small Fruit ..	1,299	1,375	986	1,475	1,615	2,248
Other (a) ..	9,110	8,420	7,977	6,267	12,858	13,687
Total (a) ..	150,732	110,070	107,079	137,722	170,273	100,646
Apples, Preserved ..	(b)	15,751	21,062	20,773	12,778	21,077

(a) Excludes preserved apples.

(a) Not available.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 200,250 tons during the year 1947-48.

5. *Consumption of Fruit and Fruit Products.*—Details of the estimated consumption of fruit and fruit products per head of population are shown below for each year 1940-47 to 1948-49 compared with the average for the years 1936-37 to 1938-39.

ESTIMATED CONSUMPTION OF FRUIT AND FRUIT PRODUCTS PER HEAD OF POPULATION : AUSTRALIA.

(lb.)

Commodity.	Average 1936-37 to 1938-39.	1946-47.	1947-48.	1948-49.
Fresh Fruit—Citrus ..	31.9	33.5	38.9	35.4
Other (a) ..	86.1	92.0	100.9	95.9
Jam ..	11.4	12.1	14.2	11.1
Dried Fruit—Vine ..	5.2	5.7	5.8	7.4
Tree ..	2.9	2.3	2.6	2.7
Canned Fruit ..	10.7	8.4	11.0	12.3
Total Fresh Fruit Equivalent ..	163.6	169.1	187.9	186.0

(a) Includes table grapes.

6. Imports and Exports of Fruit.—(i) *General.* The imports of fresh fruits into Australia are negligible, whilst those of dried fruits consist mainly of dates.

A considerable export trade in both fresh and dried fruits is carried on by Australia with overseas countries. The values of the shipments in 1947-48 amounted to £3,886,059 and £2,558,974 respectively. Apples formerly constituted the bulk of the fresh fruit exported, although the exports of citrus fruits and pears were fairly considerable. Shipments of raisins and currants have increased greatly since 1914-15 and are mainly responsible for the growth in the dried fruits exports, although dried tree fruits also figure amongst the exports. Owing to shipping difficulties and other factors the exports of fresh fruit were seriously curtailed during the 1939-45 War.

(ii) *Fresh Fruits.* Particulars of the Australian overseas trade in fresh fruits are shown in the following table :—

FRESH FRUITS : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Centals.	£	Centals.	£	Centals.	£
Average 1934-35 to 1938-39 ..	45,554	20,289	2,520,842	1,981,483	2,475,288	1,961,194
1943-44 ..	596	1,018	135,081	315,329	134,485	314,311
1944-45 ..	789	1,725	179,297	318,351	178,508	316,626
1945-46 ..	1,088	3,110	813,179	1,264,681	812,091	1,261,571
1946-47 ..	5,459	3,703	673,485	1,549,890	668,026	1,546,187
1947-48 ...	500	995	1,899,863	3,886,059	1,899,363	3,885,064

(iii) *Exports of fresh Apples, Pears and Citrus Fruits.* The quantity and value of fresh apples, pears and citrus fruits exported during each of the five years ended 1947-48, compared with the average for the five years 1934-35 to 1938-39, are shown in the following table :—

FRESH APPLES, PEARS AND CITRUS FRUITS : EXPORTS FROM AUSTRALIA.

Year.	Apples.		Pears.		Citrus Fruits.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Centals.	£	Centals.	£	Centals.	£
Average 1934-35 1938-39 ..	1,928,282	1,396,083	284,203	268,347	255,538	233,552
1943-44 ..	21,401	45,563	2,988	7,594	107,386	255,703
1944-45 ..	70,257	98,704	179	316	103,804	210,356
1945-46 ..	698,185	1,010,243	20,938	54,412	68,468	135,027
1946-47 ..	387,458	766,007	80,736	176,490	167,910	438,627
1947-48 ..	1,407,789	2,694,789	179,782	365,842	273,257	603,628

(iv) *Dried Fruits.* The quantity and value of oversea imports and exports of dried fruits, other than raisins and currants, for the five years ended 1947-48, compared with the average for the five years 1934-35 to 1938-39, are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq. This trade was prohibited during the war years but has since been resumed.

DRIED FRUITS(a) : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£	'000 lb.	£	'000 lb.	£
Average 1934-35 to 1938-39 ..	12,225	80,121	4,315	117,222	-7,910	37,101
1943-44 ..	24	660	3,631	131,188	3,607	130,528
1944-45 ..	6,626	141,996	1,860	95,239	-4,766	-46,757
1945-46 ..	7,556	150,100	3,078	198,087	-4,478	47,987
1946-47 ..	7,070	150,745	4,214	273,502	-2,856	122,757
1947-48 ..	11,835	253,971	4,508	294,932	-7,327	40,961

(a) Excludes raisins and currants referred to separately under Vineyards, § 16, par. 6.

NOTE.—Minus sign (-) denotes net imports.

(v) *Jams and Jellies.* The exports of jams and jellies have reached large proportions since the 1939-45 War. In 1947-48 shipments totalled 59,642,000 lb. valued at £2,232,168 compared with average exports of 7,118,000 lb. valued at £137,707 during the five years ended 1938-39. Small quantities of jam were imported before the war but the quantities involved now are negligible. Particulars of imports and exports during each of the five years ended 1947-48, compared with the average for the five years 1934-35 to 1938-39, are as follows:—

JAMS AND JELLIES : IMPORTS AND EXPORTS, AUSTRALIA.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 lb.	£	'000 lb.	£	'000 lb.	£
Average 1934-35 to 1938-39 ..	69	2,407	7,118	137,707	7,049	135,300
1943-44 ..	..	5	21,638	557,161	21,638	557,156
1944-45 ..	..	1	27,001	692,056	27,001	692,055
1945-46 ..	..	..	42,183	1,310,412	42,183	1,310,412
1946-47 ..	..	3	65,434	2,206,696	65,434	2,206,693
1947-48 ..	1	136	59,642	2,232,168	59,641	2,232,032

(vi) *Preserved Fruit.* The total quantity of fruit preserved in liquid, or partly preserved in liquid or pulped, imported into Australia during 1947-48 was 4,796 lb. valued at £120. Large quantities of fruit preserved in liquid are normally exported from Australia, the value of shipments in 1938-39 amounting to £1,271,525. Exports were considerably reduced during the recent war owing to the prior claims on Australia's output by the Australian and Allied Services based on Australia, but in 1947-48 the value of exports had increased to £2,765,791. In addition, the exports of pulped

fruits during 1947-48 amounted to 5,416,747 lb. valued at £256,450. Particulars of the quantities and values of fruit preserved in liquid exported from Australia for each of the five years ended 1947-48 compared with the average for the five years 1934-35 to 1938-39, are shown in the following table :—

FRUIT PRESERVED IN LIQUID : EXPORTS FROM AUSTRALIA.

Year.	Apricots.	Peaches.	Pears.	Other.	Total.
QUANTITIES ('000 lb.).					
Average 1934-35 to 1938-39	8,084	34,588	21,220	5,004	68,896
1943-44.. .. .	1,204	8,351	4,817	6,797	21,169
1944-45.. .. .	2,274	11,662	3,008	4,763	21,707
1945-46.. .. .	2,999	18,208	7,404	8,171	36,782
1946-47.. .. .	5,645	43,331	19,259	3,454	71,689
1947-48.. .. .	5,451	44,553	23,480	11,327	84,811
VALUES (£).					
Average 1934-35 to 1938-39	133,889	501,138	335,170	104,830	1,075,027
1943-44.. .. .	30,968	210,075	122,714	166,586	530,343
1944-45.. .. .	50,036	256,766	61,985	139,321	508,108
1945-46.. .. .	72,323	393,467	154,393	272,677	892,860
1946-47.. .. .	167,400	1,190,687	636,130	120,031	2,114,248
1947-48.. .. .	172,630	1,325,209	765,297	502,655	2,765,791

7. Marketing of Apples and Pears.—(i) *Apple and Pear Organization Act 1938-1948*. This Act, which was passed by the Commonwealth Parliament at the request of the apple and pear industry, provides for the establishment of an Australian Apple and Pear Board for the purpose of organizing and controlling the export trade in fresh apples and pears.

The Board originally comprised sixteen members but by an amendment of the Act in 1947 the members were reduced to twelve, representative of the following interests :— one member to represent the Commonwealth Government ; seven members to represent growers of apples and pears on the basis of two for Tasmania and one each for the other States ; three members to represent exporters of apples and pears on the basis of one each for Tasmania and Western Australia and one for the other States ; and one member to represent the employees engaged in the apple and pear industry.

The Board has power to regulate the shipment of apples and pears from Australia by licensing exporters and issuing permits to export. Power is also given to determine export quotas and to allocate the consignments from each State. The Board may appoint persons to represent it overseas.

The Apple and Pear Publicity and Research Act 1938 and the related Apple and Pear Tax Acts, referred to in earlier issues of the Official Year Book, have now been repealed by the 1947 amendment to the Apple and Pear Organization Act. The latter Act was subject to a further minor amendment in 1948.

(ii) *Apple and Pear Export Charges Act 1938-1947*. This Act provides for the imposition of a levy on all apples and pears exported from Australia for the purpose of providing the funds necessary to meet the administrative and other expenses of the Board.

(iii) *Apple and Pear Acquisition*. Exports of apples and pears were seriously curtailed as a result of the war, and during the 1940 to 1948 seasons crops were acquired and marketed under the National Security (Apple and Pear Acquisition) Regulations and Regulations issued under the Defence (Transitional Provisions) Act 1946. During the 1940 season the scheme was supervised by a Marketing Committee attached to the Australian Apple and Pear Board with committees operating in each State, but from 1941

the operations of the Australian Apple and Pear Board were suspended and the Australian Apple and Pear Marketing Board was constituted under the National Security (Apple and Pear Acquisition) Regulations to handle and market all apples and pears acquired. The Regulations provided for the acquisition and orderly marketing of apple and pear crops, growers being paid guaranteed advances on fruit acquired. During the 1940, 1941 and 1942 seasons, the acquisition applied to all States but from 1943 to 1948 the scheme operated only in respect of crops grown in Tasmania and Western Australia. The following table gives details of the total quantity of fruit acquired and the amounts paid to growers as advances on the basis of "bare" fruit in the orchard for the seasons 1944 to 1948. All packing and marketing costs such as cases, packing, transport, cool storage, selling, etc. were paid by the Board:—

APPLE AND PEAR ACQUISITION SCHEME : QUANTITY ACQUIRED AND AMOUNTS PAID.(a)

State.	1944—No. 5 Acquisition.		1945—No. 6 Acquisition.		1946—No. 7 Acquisition.		1947—No. 8 Acquisition.		1948—No. 9 Acquisition.	
	Quantity.	Growers Advances.	Quantity.	Growers Advances.	Quantity.	Growers Advances.	Quantity.	Growers Advances.	Quantity.	Growers Advances.

APPLES.

		'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.
W. Aust.	..	1,567	239	1,207	240	1,543	223	2,497	405	1,112	349
Tas.	..	8,027	1,108	6,685	1,036	8,522	1,170	2,363	415	6,086	1,227
Total	..	9,594	1,347	7,982	1,276	10,065	1,393	4,860	820	7,198	1,576

PEARS.

(Other than Canning.)

		'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.
W. Aust.	..	77	14	116	26	77	14	156	27	57	11
Tas.	..	534	104	636	105	521	97	481	93	558	97
Total	..	611	118	752	131	598	111	637	120	615	108

(a) Acquisition scheme did not apply to New South Wales, Victoria, Queensland and South Australia after 1942.

Following a decision of the Commonwealth Government towards the end of 1948 not to apply its acquisition powers any longer, the 1949 apple and pear crops in Tasmania and Western Australia were handled under State marketing schemes and the Australian Apple and Pear Marketing Board acted as the marketing agent for the State schemes. The actual arrangements for the 1949 season were much the same as previously except that control, instead of being vested in the Commonwealth, was taken under State legislation. The Commonwealth, however, guaranteed each State concerned against any financial loss on their respective marketing pools. In Western Australia a complete acquisition was implemented by the State on lines similar to the Commonwealth acquisition. In Tasmania a voluntary marketing pool was established in which growers participated by entering into an agreement with the State Minister for Agriculture to deliver their crop to the pool for marketing purposes.

8. *Overseas Marketing of Canned Fruit.*—(i) *The Canned Fruits Export Control Act 1926–1938.* This legislation was introduced at the request of canners and representative organizations of fruit-growers with the object of organizing the oversea marketing of canned fruit. The original Act referred to canned apricots, peaches and pears only, but canned pineapples and canned fruit salads consisting of not less than 75 per cent. of specified fruits were subsequently brought within the scope of the Board's operations.

The personnel of the Australian Canned Fruits Board consists of one representative each from proprietary and privately owned canneries, co-operative canneries, State-controlled canneries, pineapple interests and the Commonwealth Government. No canned fruits to which the Act applies are permitted to be exported except under a licence issued in accordance with conditions recommended by the Board. The system of marketing adopted by the Board, including the fixation of minimum selling prices overseas, the appointment of a London agency and the engaging in oversea trade publicity, has resulted in the satisfactory disposal of the annual exportable surplus of canned fruits. The distribution of canned fruits has been widened and the exporting side of the industry placed on a sounder basis through the Board's operations.

(ii) *The Canned Fruits Export Charges Act 1926-1938.* This Act provides for the imposition of a levy on the export of canned fruits to meet the administrative and other commitments of the Board. The rate of the levy is fixed by regulation from time to time. An amendment in 1929 provided for certain exemptions from payment of the levy when recommended by the Board.

(iii) *War-time Contracts.* During 1940 and 1941 purchases of canned fruit were made by the British Ministry of Food at prices fixed on an f.o.b. basis, Australian ports. From 1942 to 1945 the requirements of the Defence Services and other Governmental orders necessitated official control of disposals, and commercial shipments of canned fruits virtually ceased, while quantities available for civilian consumption were considerably below normal requirements. In 1946 commercial shipments were resumed and approximately one million cases of canned fruits were exported to the United Kingdom under an official arrangement which was virtually on a merchant to Government basis. A similar arrangement has operated in respect of exports to the United Kingdom during 1947, 1948 and 1949.

§ 18. Vegetables for Human Consumption.

1. *Area and Production of Fresh Vegetables.*—The pre-war production of vegetables in Australia, which had been sufficient to meet the needs of the population was, generally speaking, supplied by growers whose holdings were adjacent to centres of consumption. These areas were classified for statistical purposes as market gardens and were tabulated as such. Details of the areas planted and production respecting individual kinds of vegetables were not collected.

Following the outbreak of war in the Pacific in December, 1941 and the establishment of Australia as a base for Australian and Allied Services in the South-West Pacific Area it was evident that the production of fresh vegetables under the conditions then existing would be insufficient to meet the additional demand from the Services. Consequently extensive development of vegetable-growing in Australia was undertaken, resulting in an expansion from the peace-time need of about 100,000 acres to more than 200,000 acres exclusive of potatoes, onions, navy beans and blue peas, details of whose production are referred to in §§ 10, 11 and 12 of this Chapter.

This development was achieved by continuing supplies of vegetables to the civil population from the market gardens already established, by extending production to areas which previously had not grown these crops and by the mechanization of the industry. Farming operations were thus able to be undertaken in many cases on a scale larger than that normally adopted in Australia. In addition, the letting of contracts at guaranteed prices proved an attraction, and the vegetable-growing industry was able to produce the additional quantities necessary to meet the war-time needs of the services as well as those of the civil population. Since the close of the war there has been a considerable reduction in vegetable growing and the area of the crops dealt with in this section declined from the war-time peak of 240,282 acres in 1944-45 to 156,431 acres in 1947-48.

Details of the area and production of vegetables for the seasons 1945-46 to 1947-48 are given in the following table. Similar details for the years 1942-43 to 1943-44 were given in earlier issues of the Year Book (No. 36, p. 839 and No. 37, p. 956). Owing to the difference in collection already referred to, comparable figures prior to 1942-43 are not available.

FRESH VEGETABLES(a) FOR HUMAN CONSUMPTION : AUSTRALIA.

Vegetable.	1945-46.		1946-47.		1947-48.	
	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Beans, French ..	19,873	15,291	18,303	14,819	16,527	18,466
Beetroot ..	4,095	20,995	2,629	13,620	2,151	12,454
Cabbages and Brussels Sprouts ..	11,082	106,489	9,156	99,618	7,244	76,285
Carrots ..	7,044	46,870	5,809	38,723	4,794	30,880
Cauliflowers ..	7,107	77,757	7,099	90,866	6,942	79,103
Cucumbers ..	2,402	3,446	2,266	4,076	1,318	2,584
Lettuces ..	4,509	15,566	4,152	12,607	3,958	14,101
Parsnips ..	1,902	13,438	1,955	13,423	1,885	13,926
Peas, Green ..	60,918	30,697	60,131	31,905	51,058	34,850
Potatoes, Sweet ..	1,671	5,584	1,845	5,602	928	2,862
Pumpkins ..	31,227	78,621	29,467	68,447	23,120	60,024
Tomatoes ..	22,586	91,502	23,375	113,278	19,235	92,516
Turnips, Swede and White ..	9,641	38,367	7,486	30,390	5,828	25,039
All Other ..	12,466	..	12,184	..	11,443	..
Total ..	196,523	..	185,857	..	156,431	..

(a) Excludes potatoes, onions, blue peas and navy beans.

2. Production of Canned Vegetables.—As a corollary to the development mentioned above a considerable expansion occurred in the processing of vegetables. New canning factories were established in many parts of the Commonwealth, and a new industry for the processing of vegetables by the dehydration method was commenced. Since the close of hostilities there has been a sharp decline in the output of canned vegetables, but the quantities canned in 1947-48 and 1948-49 were considerably greater than in 1938-39.

The development in the vegetable canning industry is indicated in the table below :—

PRODUCTION OF CANNED VEGETABLES : AUSTRALIA.

('000 lb.)

Vegetable.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49. (a)
Asparagus ..	2,150	2,752	2,555	2,178	2,568	2,327	2,826
Beans ..	2,491	6,137	12,590	10,058	12,224	11,306	14,805
Beetroot ..	(b)	7,734	16,203	10,903	2,593	764	3,021
Cabbages ..	(b)	13,278	1,009	1,919	1,022	112	177
Carrots ..	(b)	12,789	38,883	18,312	3,612	982	1,957
Cauliflower ..	198	201	(b)	(b)	(b)	(b)	493
Peas (Green) ..	1,861	9,353	16,751	23,033	21,787	22,650	14,779
Silver Beet ..	(b)	1,794	7,493	2,453	9	(b)	(b)
Tomatoes ..	1,578	7,124	7,417	4,097	5,385	3,029	3,933
Other (c) ..	(d) 1,977	34,192	(d) 16,248	(d) 34,009	(d) 9,086	(d) 5,161	(d) 4,622
Total ..	10,255	95,354	119,149	106,962	58,286	46,331	46,613

(a) Subject to revision. (b) Included in "Other Vegetables". (c) Includes Parsnips, Potatoes, Turnips, Sweet Corn, etc. (d) Includes particulars of vegetables marked (b).

3. Production of Dehydrated Vegetables.—The dehydration of vegetables was not undertaken in Australia until after the outbreak of war in the Pacific towards the close of 1941. The demand for vegetables in this form by Australian and Allied Services made

this development a necessity and as a result 33 dehydration plants were erected in all States except Queensland, in areas where adequate supplies of suitable vegetables were assured. With the termination of Commonwealth contracts for dehydrated vegetables in October, 1946, a number of plants ceased to operate and output for commercial purposes in the remaining plants was drastically curtailed. Details of the quantities of fresh vegetables used for dehydration and the output of dehydrated vegetables during the years 1942-43 to 1946-47 were shown on page 957 of Official Year Book No. 37.

4. Imports and Exports of Vegetables.—Oversea exports of pulse and fresh vegetables during 1947-48 consisted of:—pulse, 11,284 tons, £530,272; onions, 18,230 tons, £352,771; potatoes, 30,008 tons, £622,379; other vegetables, 4,472 tons, £209,468. Imports totalled 6,363 tons, valued at £282,353, of which pulse comprised 6,111 tons, valued at £279,542.

In 1947-48 exports of vegetables preserved in liquid consisted of:—Peas, 4,285,705 lb., £168,392; tomatoes, 2,532,960 lb., £69,405; other vegetables, 25,835,288 lb., £666,232.

5. Consumption of Vegetables.—Details of the estimated consumption of vegetables for each of the three years ended 1948-49 are shown on pp. 1243 and 1245 of this Year Book.

§ 19. Minor Crops.

1. General.—There are many other crops which do not occupy so prominent a position as those already enumerated. Some of the more important of these are included under the headings—Tobacco, Hops, Flax, Peanuts, Cotton and Sorghum.

2. Grass Seed.—Particulars of the area of grass crops grown for seed cannot be accurately determined as seed is obtained from certain crops such as clover, lucerne, etc., at a second cutting. The production of seed recorded in 1947-48 was:—clover, 35,319 cwt.; lucerne, 7,594 cwt.; other grass seed, 44,390 cwt.; a total of 87,303 cwt.

3. Other Grains from Sorghums.—In addition to the grass seed referred to in paragraph 2 above and grain sorghum in § 9, considerable expansion has occurred in the area sown to Japanese Millet, Panicum and Setaria. Particulars of the area and production for the years 1942-43 to 1947-48 are given in the table below.

SORGHUMS: AREA AND PRODUCTION OF GRAIN, AUSTRALIA.

Year.	Japanese Millet.(a)		Panicum, Millet and Setaria.(b)	
	Area.	Production.	Area.	Production.
	Acres.	Tons.	Acres.	Bus.
1942-43	496	149	9,319	116,282
1943-44	1,083	460	15,948	300,307
1944-45	2,948	964	16,570	178,612
1945-46	2,628	1,526	22,172	325,194
1946-47	1,393	678	39,372	407,482
1947-48	748	225	16,086	236,430

(a) Victoria only.

(b) Queensland only.

4. Tobacco.—(i) General. Tobacco-growing years ago promised to occupy an important place amongst the agricultural industries of Australia. As early as the season 1888-89, the area of this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to over 2,000 acres, and that in Queensland to over 1,000 acres, the total area declined considerably.

(ii) *States, Area and Production.* The expansion of the tobacco-growing industry was hoped for as a war-time measure but, although the acreage planted increased slightly during the first three war years, it has since decreased considerably, being in 1947-48 only 34 per cent. of the annual average for the ten years ended 1938-39, and the production of dried leaf only 46 per cent. of the pre-war average. The area of 3,843 acres and production of 2,484,000 lb. represented a decrease on 1941-42 of 4,977 acres and of more than 4,556,000 lb.

In the following table particulars of the area and production of tobacco are given by States for each of the years 1943-44 to 1947-48, together with averages for the ten-year periods ended 1938-39 and 1947-48:—

TOBACCO : AREA AND PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Total.
AREA (ACRES).								
Average 1929-30 to 1938-39 ..	1,274	6,237	2,865	292	502	89	1	11,260
1943-44 ..	657	2,000	2,348	..	1,611	..	..	6,616
1944-45 ..	410	1,500	1,862	..	1,003	..	..	4,775
1945-46 ..	370	1,408	1,897	..	296	..	..	3,971
1946-47 ..	402	1,186	2,255	..	649	..	..	4,492
1947-48 ..	414	958	1,912	..	559	..	..	3,843
Average 1938-39 to 1947-48 ..	636	1,764	3,002	4	999	26	3	6,434
PRODUCTION OF DRIED LEAF ('000 lb.).								
Average 1929-30 to 1938-39 ..	860	2,393	1,590	83	361	56	..	5,343
1943-44 ..	515	1,544	1,779	..	795	..	..	4,633
1944-45 ..	348	575	1,314	..	607	..	..	2,844
1945-46 ..	365	431	1,411	..	298	..	..	2,505
1946-47 ..	399	1,087	1,969	..	539	..	..	3,994
1947-48 ..	338	130	1,581	..	435	..	..	2,484
Average 1938-39 to 1947-48 ..	546	1,002	1,980	(a) 1	757	8	1	4,295

(a) Average nine years.

(iii) *Australian Tobacco Board.* The Australian Tobacco Board was constituted in May, 1941 under the National Security (Australian Tobacco Leaf) Regulations for the purpose of controlling the marketing of Australian-grown tobacco leaf, which was required to be submitted to the Board for appraisement. The Board ceased to function towards the end of 1948 and subsequent crops have been marketed at open auction in the respective States.

(iv) *Tariff Board Inquiries.* The tobacco industry has been the subject of a number of investigations. The Tariff Board inquired into the industry in 1926, 1931 and 1940 and reports were issued.

(v) *Tobacco Inquiry Committee.* The Tobacco Inquiry Committee, which was appointed by the Commonwealth Government to investigate certain aspects of the industry in North Queensland, presented its report in 1933. Recommendations included that for payment of a sum of £20,000 annually for a period of five years to assist the States to continue economic and scientific investigations. This recommendation was adopted and the distribution was spread between the years 1934-1938 as follows:—£5,000 to the Council for Scientific and Industrial Research (now the Scientific and Industrial Research Organization), £3,750 to each of the States of New South Wales, Victoria and Queensland, and £1,250 each to South Australia, Western Australia and Tasmania.

A further grant of £62,500, which was increased by £11,250 in 1941, was allotted by the Commonwealth Government to be paid periodically between the years 1939 to 1943. The amount of £73,750 was allocated as follows:—Council for Scientific and Industrial Research, £25,000, and £10,000 annually among the States for the years 1939 and 1941 to 1943, and £8,750 for 1940. In August, 1946 the Commonwealth Cabinet approved a grant of £10,000 per annum for five years on a £ for £ basis to be allocated among producing States for experimental and demonstration work in connexion with tobacco leaf production; particularly in regard to control and elimination of diseases and pests. The annual grant of £10,000 has been allocated to States on the following basis:—Queensland, £3,750; New South Wales, £1,500; Victoria, £2,250; Western Australia, £2,500.

The Scientific and Industrial Research Organization is investigating diseases affecting the tobacco plant, including work on disease-resisting varieties, and is making tests of smoking quality. In spite of delays due to the war, the Organization has been successful in discovering effective means of preventing blue mould, which has seriously retarded the development of the industry. The States are carrying out field investigations on disease resistance, selection, yield and quality improvement, and are conducting instructional, demonstrational and field experimental work.

(vi) *Tobacco Factories.* In 1947-48 the quantity of stemmed leaf used in tobacco factories in Australia amounted to 26.6 million lb. of which 2.9 million was of local origin the balance being imported, chiefly from the United States of America.

(vii) *Oversea Trade.* Imports of tobacco and manufactures thereof into Australia during 1947-48 were valued at £7,721,388, including 30,951,400 lb. of unmanufactured tobacco valued at £5,691,599. Exports of tobacco during 1947-48 were valued at £222,095.

5. *Hops.*—Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1947-48 being 1,503 acres, of which 1,263 acres were in Tasmania, and 240 acres in Victoria. A small area was also grown in Western Australia, but the details are not available for publication. The Tasmanian area, though still small, has increased during the present century, the total for 1901-2 being 599 acres. The cultivation of hops was much more extensive in Victoria some 60 years ago than at present, the area in 1883-84 being 1,758 acres.

The production of hops in Australia is insufficient to meet local requirements, and additional supplies are imported to meet the needs of the brewing industry. In the following table details of the production, imports and exports of hops and the quantity of hops used in breweries are shown for each of the years 1943-44 to 1947-48 in comparison with the average for the five years ended 1938-39.

HOPS : PRODUCTION AND DISPOSAL, AUSTRALIA.

Year.	Production.		Imports.	Exports.	Net Available Supplies. (a)	Quantity used in Breweries.
	Quantity.	Gross Value.				
	Cwt.	£	Cwt.	Cwt.	Cwt.	Cwt.
Average 1934-35 to 1938-39	20,576	173,253	1,020	78	21,518	18,992
1943-44	26,348	238,162	1,021	401	26,968	21,710
1944-45	23,160	230,400	177	60	23,277	22,156
1945-46	19,835	225,946	2,402	55	22,182	22,436
1946-47	22,278	278,144	4,832	6	27,104	25,813
1947-48	24,449	317,531	9,823	15	34,257	25,050

(a) Dieregarding movements in stocks.

The Tariff Board conducted an inquiry into the hop-growing industry and issued a report on 12th June, 1945.

6. Flax.—For many years flax was grown intermittently in parts of Victoria and unsuccessful attempts were made to introduce its cultivation in some of the other States.

During the 1914-18 War there was an acute shortage of flax fibre and expansion of production was encouraged by the Commonwealth Government. Bounties were paid on production during the years 1907 to 1918 and again for each of the five years ended 1935. The amounts distributed as bounty during these periods totalled £2,370 and £2,839 respectively. However, the maximum area, which was sown in 1919-20, was only slightly more than 1,600 acres. The area subsequently declined to less than 200 acres in 1928-29. A further attempt to establish the industry was made in 1935 and as a result the area in Victoria had increased to 1,358 acres by 1938-39. Following the outbreak of the 1939-45 War the area sown increased rapidly, reaching over 54,000 acres in 1941-42 and over 61,000 acres in 1944-45. In 1945-46, however, the area sown fell by 32 per cent. to 41,413 acres. Victoria is the chief producing State, but South Australia, Western Australia and Tasmania have also contributed to this war-time expansion which was necessary to ensure Australia's supplies of flax and, in accordance with an agreement negotiated between the two Governments, to provide an export to assist in meeting the urgent needs of the United Kingdom. The arrangement concluded on 31st October, 1946, and the area under flax for fibre declined to 18,354 acres in 1946-47 and to 17,790 acres in 1947-48.

Details of the area under flax and the production of straw are given in the following table :—

FLAX FOR FIBRE : AREA AND PRODUCTION.

Year.	Victoria.	S. Australia.	W. Aust.	Tasmania.	Total.
AREA (ACRES).					
Average 1934-35 to 1938-39	1,021	..	..	..	(a) 1,030
1943-44.. ..	31,567	9,511	7,642	6,911	55,631
1944-45.. ..	38,459	10,537	8,278	3,803	61,077
1945-46.. ..	26,419	6,292	5,356	3,346	41,413
1946-47.. ..	12,041	2,599	2,940	774	18,354
1947-48.. ..	12,183	3,544	2,063	..	17,790
PRODUCTION (TONS OF STRAW).					
Average 1934-35 to 1938-39	61	..	..	..	61
1943-44.. ..	40,937	10,450	6,618	4,456	62,461
1944-45.. ..	17,035	3,315	3,907	4,088	28,345
1945-46.. ..	18,798	6,969	4,229	1,360	31,356
1946-47.. ..	13,858	4,009	2,108	627	20,602
1947-48.. ..	19,427	6,068	1,694	..	27,189

(a) Includes nine acres of unproductive flax in Queensland.

Although the growing of flax on a large scale was established as a war-time measure, it is proposed to continue the industry at a level sufficient to meet local requirements, providing that it can be efficiently maintained in competition with other countries.

The industry is under the control of the Flax Production Committee appointed under the Supply and Development (Flax Production) Regulations. The Committee has, amongst other things, organized the growing and harvesting of the crop, and the processing of the flax as well as disposing of the resultant products to spinners and others in Australia and overseas. In 1943-44 in the four producing States there were 31 mills under the control of the Committee. The number of flax mills operating in 1947-48 was sixteen.

Prior to 1948-49, the growing of flax for oil had not been developed extensively in Australia and in 1947-48 the area devoted to this purpose was only 1,844 acres from which 273 tons of linseed was obtained. Action is being taken to develop this industry, however, and in 1948-49 the area had risen to 14,516 acres. Up to the present, crops are mainly being held for seed purposes with a view to further expansion of the industry, the ultimate objective being the production of sufficient linseed to meet Australia's total oil requirements.

The flax industry was the subject of two investigations, one in 1933 and the other in 1936 (*see* Official Year Book No. 32, p. 658).

7. *Peanuts.*—The production of peanuts, or groundnuts, in Australia is mainly confined to Queensland, although small quantities are grown in New South Wales and Western Australia. Details of the area and production are given in the table below.

PEANUTS : AREA AND PRODUCTION, AUSTRALIA.

Year.	Area (Acres).				Production (Tons).			
	N.S.W.	Q'land.	W. Aust.	Total. (a)	N.S.W.	Q'land.	W. Aust.	Total. (a)
Average 1929-30 to 1938-39 ..	29	8,320	100	8,449	(b) 11	3,715	24	3,750
1943-44 ..	..	18,415	25	18,440	..	9,614	1	9,615
1944-45 ..	7	18,936	42	18,985	3	10,225	14	10,242
1945-46 ..	17	25,203	13	25,233	7	13,298	4	13,309
1946-47 ..	17	38,800	4	38,821	23	22,750	2	22,775
1947-48 ..	97	34,645	28	34,770	41	15,804	3	15,848
Average 1938-39 to 1947-48 ..	16	20,916	47	20,979	(c) 12	10,339	12	10,363

(a) Excludes Northern Territory.

(b) Average for five years.

(c) Average for seven years.

The gross value of the 1947-48 crop was £625,599.

In addition to the production shown above, considerable quantities of peanut kernels were formerly imported annually, chiefly from India, for oil expression purposes, but this has been suspended since January, 1946. Details of Australia's available supplies in terms of kernels are given for the years 1938-39 and 1944-45 to 1948-49.

PEANUTS (IN TERMS OF KERNELS) : AVAILABLE SUPPLIES, AUSTRALIA.

(Tons.)

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Production(a) ..	3,500	6,410	6,828	8,878	15,183	10,565
Imports ..	2,270	11,022	764	..	5	3
Total ..	5,770	17,432	7,592	8,878	15,188	10,568

(a) Crop harvested in April-May of the preceding year and available for consumption during year shown.

8. *Broom Millet*.—The total area devoted to broom millet in 1947-48 was 3,868 acres, of which 3,294 acres were in New South Wales, 422 in Victoria and 172 in Queensland. The total production from these areas was 15,239 bushels of grain and 25,499 cwt. of fibre.

9. *Nurseries*.—In all the States fairly large areas are occupied as nurseries. The acreages under flowers, fruit-trees, etc., in 1947-48 in the various States were as follows:—New South Wales, 1,086 acres; Victoria, 2,931 acres; Queensland, 193 acres; South Australia, 98 acres; Western Australia, 265 acres; Tasmania, 227 acres; and Australian Capital Territory, 5 acres; a total for Australia of 4,810 acres.

10. *Cotton*.—(i) *General*. The production of cotton in Australia is restricted to Queensland where cultivation began in 1860, and ten years later the area cropped had increased from 14 acres to over 14,000 acres. The reappearance of American cotton in the European market on the conclusion of the Civil War gave a severe setback to the new industry, and the area declined continuously until 1888, when only 37 acres were planted. Later on the industry was revived, and manufacturing on a small scale was undertaken on two separate occasions at Ipswich, but low prices over a term of years checked development.

(ii) *Bounties, etc.* In 1913 the Queensland Government made an advance of 1½d. per lb. on seed cotton and ginned it on owner's account, the final return being equal to about 1¾d. per lb. The rise in price enabled the Government to offer a guarantee of 5½d. per lb. for seeded cotton of good quality for the three years ended 31st July, 1923, and the areas picked increased from 166 acres in 1920 to 50,186 acres in 1924. Guarantees were continued until 1926, when the Commonwealth Government granted a bounty varying from ¾d. to 1½d. per lb. according to grade. In addition, the cotton-manufacturing industry received a graduated bounty on all cotton yarn manufactured in Australia which contained 50 per cent. of home-grown cotton. This bounty, however, ceased to operate after 30th June, 1932. The cotton-growing industry was further assisted by the Bounty Act of 1934, which extended the period to 1940 at varying rates of bounty.

The Raw Cotton Bounty Act 1940 provided an extension of assistance until 31st December, 1946. The Act was amended in August, 1946 to provide a guaranteed net average return to cotton-growers of 15d. per lb. of raw cotton for five years from 1st January, 1947.

The Tariff Board carried out an investigation into the cotton-growing industry in 1945.

(iii) *Expansion of the Cotton-growing Industry*. Australia produces only portion of its requirements of raw cotton, the balance being obtained chiefly from the United States of America and India. Efforts have been directed towards increasing production by an extension of area and the introduction of irrigation methods, but the results so far have not met with much success. Production was increased during the war years but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter XXIV. "Manufacturing Industry".

The area under cultivation and the production in Queensland for the years 1944 to 1948 are shown hereunder together with the averages for the periods of ten years ended 1938-39 and 1947-48 :—

COTTON : AREA AND PRODUCTION IN QUEENSLAND.

Season ended September—	Area Sown.	Production of Cotton.				Average Yield per Acre Sown.	
		Unginned.		Ginned.	Ginned- Equivalent in Bales. (a)	Unginned.	Ginned.
		Quantity.	Gross Value.				
	Acres.	'000 lb.	£	'000 lb.	Bales.	lb.	lb.
Average 1930 to 1939 ..	58,436	16,617	291,106	5,564	11,181	284	95
1944(b) ..	17,424	8,508	186,085	2,946	6,055	488	169
1945 ..	7,698	1,819	41,818	651	1,305	236	85
1946 ..	7,902	3,022	65,552	1,139	2,372	382	144
1947 ..	8,460	2,064	46,213	762	1,531	244	90
1948 ..	6,222	1,821	47,918	713	1,439	293	115
Average 1939 to 1948 ..	28,972	8,636	173,036	3,042	6,173	335	105

(a) Bales of approximately 500 lb. (b) Includes 7,221 lb. of unginned cotton and the equivalent of ginned cotton grown in New South Wales.

(iv) *Consumption of Raw Cotton.* The following table shows the expansion which has taken place in the consumption of raw cotton in Australia since 1938-39.

RAW COTTON : PRODUCTION, IMPORTS AND CONSUMPTION, AUSTRALIA.

('000 lb.)

Year.	Production.	Imports.	Total.	Consumption in Cotton Mills.
Average 1936-37 to 1938-39..	5,180	9,882	15,062	12,523
1943-44	3,346	20,805	24,151	30,955
1944-45	2,946	28,567	31,513	27,758
1945-46	651	26,494	27,145	25,329
1946-47	1,139	34,341	35,480	30,132
1947-48	762	34,114	34,876	31,401

11. *Coffee.*—Queensland is the only State in which coffee has been grown to any extent, and the results have not been satisfactory. The area of this crop reached its highest point in the season 1901-2 with 547 acres. Thereafter, the acreage fluctuated but on the whole with a downward tendency, and in 1947-48 only 2 acres with a production of 2,373 lb. were recorded.

12. **Other Crops.**—Miscellaneous small crops grown in Australia include chicory, cut flowers, herbs, ginger, liquorice and vegetable seeds.

§ 20. Bounties, etc.

1. **Bounties.**—The bounties paid by the Commonwealth Government during the year ended 30th June, 1948 amounted to £43,988. This amount refers only to bounties paid under the Bounties Acts and does not include financial assistance given to wheat-growers and other primary producers under other Acts. Particulars of the assistance so rendered by the Commonwealth Government are furnished hereafter. Details of the amounts paid as bounty during the years 1943-44 to 1947-48 are as follows:—

BOUNTIES : AUSTRALIA.

Articles on which Bounty was Paid.	Rate of Bounty Payable.	Date of Expiry of Bounty.	Amount Paid. (£)				
			1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Wire Netting Bounty Acts 1939-1944	9s. 7d. per ton ..	23rd Oct., 1947	447	496	349	633	321
Tractor Bounty Act 1939-1947	According to capacity, £32-£72	23rd Oct., 1951	5,652	13,517	10,095	22,955	19,978
Wine Export Bounty Act 1947	rs. per gallon from 1st March, 1940	28th Feb., 1947	22,506	34,613	53,649	65,246	13,894
Raw Cotton Bounty Act 1940-1946	(a)	31st Dec., 1951	..	..	2 11,887	2 5,732	8,868
Papua and New Guinea Bounties Act 1937—Cocoa Beans ..	1½d. per lb. ..	31st Dec., 1947	..	..	136	199	927
Bamboos and Rattans (Unmanufactured)	£4 per ton ..	.. ..	..	..	..	..	..
Manila, Sisal and Other Hemp Fibres	£6 .. ..	.. ..	..	..	..	..	..
Coir Fibre	£3 .. ..	.. ..	..	..	..	..	..
Kapok	2d. per lb. ..	.. ..	..	..	..	..	..
Total .. ..	.. ..	.. ..	28,605	48,426	76,116	94,765	43,988

(a) Rates subject to variation as prescribed.

2. **Other Financial Assistance to Primary Producers.**—(i) *General.* In addition to the payment of bounties mentioned in the preceding paragraph, financial assistance has been granted by the Commonwealth Government for the relief of wheat-growers, fruit-growers, and other primary producers. The amounts shown exclude such items as the expenditure on cattle tick control, banana industry, tobacco investigation and apple and pear research, which indirectly benefits the industries concerned, and exclude loans made to States to alleviate hardship suffered by primary producers in consequence of drought. The distribution as bounty, relief or subsidy has been made in the following manner.

Details of payments made prior to 1938-39 are given on page 847 of Official Year Book No. 36, while particulars for the years 1939-40 to 1943-44 will be found on page 965 of Official Year Book No. 37.

AMOUNTS PAID BY THE COMMONWEALTH GOVERNMENT AS ASSISTANCE FOR RELIEF OF PRIMARY PRODUCERS.

(£.)

Amounts paid to—	Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Total.
Wheat-growers as—									
Assistance ..	1938-39	558,489	307,564	70,824	398,559	421,296	(a) 51,961	..	1,808,693
Relief (Drought) ..	1944-45	644,034	164,420	231,717	378,621	61,113,386	(a) 50,561	..	2,582,739
	"	475,000	725,000	..	330,000	40,000	..	..	1,570,000
Assistance ..	1945-46	1,132,251	602,938	183,518	448,553	(b) 639,228	(a) 68,914	..	3,075,402
Relief (Drought) ..	"	Cr. 1,146	70,000	..	101,110	..	..	..	169,664
Assistance ..	1946-47	334,996	560,244	47,108	417,590	(b) 340,968	(a) 50,026	..	1,750,932
Relief (Drought) ..	"	315,092	150,000	..	66,847	..	..	..	531,939
Assistance ..	1947-48	305,414	261,260	38,842	180,474	(b) 155,385	379	..	941,754
Relief (Drought) ..	"	494,955	50,000	..	— 35	..	..	..	544,920
Assistance (Special Payment) ..	1948-49	..	..	..	..	..	7,875	..	7,875
Relief (Drought) ..	"	43	..	..	..	..	..	..	43
Total 1931-32 to 1948-49	..	12,623,699	8,515,816	1,299,590	8,518,209	8,923,356	694,799	2,954	40,578,423
Fruit-growers—									
Total 1933-34 and 1934-35(c)	..	20,763	58,620	2,581	18,374	25,631	134,031	..	260,000
Primary Producers (other than wheat-growers)—									
Artificial Fertilizer subsidy	1938-39	18,290	76,500	19,020	36,400	43,260	12,460	90	206,020
" ..	1944-45	303,506	697,955	41,435	456,968	569,003	145,521	..	2,214,388
" ..	1945-46	398,953	935,304	70,661	699,967	1,028,642	152,916	..	3,286,443
" ..	1946-47	431,702	952,257	108,271	646,546	880,191	155,080	..	3,174,047
" ..	1947-48	461,505	1,217,784	104,089	637,464	1,048,650	151,273	..	3,620,765
" ..	1948-49	435,078	1,201,640	152,068	634,263	1,013,737	100,132	..	3,536,918
Total 1932-33 to 1948-49	..	2,593,571	6,550,584	699,491	3,929,824	5,606,936	935,865	370	20,316,641
Dairying Industry	1944-45	1,495,196	2,716,807	1,878,759	314,606	260,287	146,542	..	6,812,197
" ..	1945-46	1,523,680	2,383,606	1,745,454	322,593	273,703	124,415	..	6,373,511
Relief (Drought) ..	1946-47	1,069,987	2,353,084	1,111,112	322,149	238,453	128,684	..	5,223,469
Dairying Industry	"	143,800	23,803	24,909	4,322	333	..	..	197,257
Relief (Drought) ..	1947-48	2,531,646	3,284,270	1,533,734	787,879	481,509	247,903	..	8,867,001
Dairying Industry	"	11,116	..	..	..	..	..	..	11,116
Relief (Drought) ..	1948-49	1,829,902	1,338,411	825,280	384,938	275,283	149,137	..	4,802,951
Total 1942-43 to 1948-49	..	10,714,723	15,144,460	9630,617	2,524,193	1,857,231	948,704	..	40,819,928
Grand Total 1931-32 to 1948-49 ..	..	25,952,756	30,269,480	11,632,279	14,990,600	16,413,154	2,713,399	3,324	101,974,992

(a) Includes special grant to Tasmania. (b) Includes Wheat Acreage Restriction Grant. (c) Growers of apples, pears and mandarins. (d) Includes subsidy payments of £186,649 on nitrogenous fertilizers. (e) Includes subsidy payments of £129,683 on nitrogenous fertilizers. (f) Includes subsidy payments of £163,813 on nitrogenous fertilizers. (g) Includes payment of £1,659,325 recovered in London. (h) Includes £3,484,729 recovered from the United Kingdom Government. (i) Includes £1,819,115 recovered from the United Kingdom Government. (j) Includes £150,000 recovered from the United Kingdom Government.

NOTE.—Minus sign (—) denotes an adjustment due to overpayment in previous years.

(ii) *Wheat-growers.* Details of payments made prior to 1938-39 will be found in Official Year Book No. 36. In 1938-39 a sum of £1,808,693, collected through the medium of a flour tax, was allocated for distribution as relief to wheat-growers.

Allocations to the States for the same purpose during the years 1944-45 to 1948-49 were £1,995,775 in 1944-45, £1,779,238 in 1945-46, £1,747,383 in 1946-47, £985,327 in 1947-48 and £1,319 in 1948-49. The rate of flour tax has been nil since December, 1947.

In addition to the foregoing amounts paid from flour tax, compensation was paid to wheat-growers in Western Australia, where acreage restrictions applied in respect of the 1942-43 to 1945-46 harvests. The amounts so paid during each year 1942-43 to 1947-48 were £535,000, £599,348, £586,964, £243,828, £2,619 and £97 respectively.

(iii) *Artificial Fertilizers Subsidy.* Prior to the 1939-45 War, assistance was given to primary producers, other than wheat-growers, in the form of a subsidy on artificial fertilizers generally; subject to certain provisions, the rate was 15s. for each ton of artificial manure used in the production of primary produce, but in 1936-37 this was reduced to 10s. per ton. The payment of this subsidy ceased on 30th June, 1939.

Because of the substantial increases in the price of superphosphate and their effect on the efficiency of the farming industry, the Commonwealth Government introduced a bounty on superphosphate produced and sold in Australia after 1st July, 1941. The rate of bounty was fixed at 25s. per ton, payable to manufacturers, who were required to adjust their prices so that consumers received the full benefit of the subsidy. From July, 1942 to September, 1948 a revised basis of subsidy payments operated under which payment was made to manufacturers under a system designed to stabilize the price of superphosphate in the face of rising costs and to return to producers a reasonable margin of profit. In September, 1948 a flat rate system was re-introduced, the rates of subsidy being £2 15s. per ton in Western Australia, £2 10s. per ton in Eyre Peninsula and £2 5s. 6d. per ton elsewhere. Subsidy has also been paid on nitrogenous fertilizers from 1943-44. From that year proceeds from sales under the equalization scheme, under which these fertilizers are handled, have been less than expenditure incurred by the equalization pool, and the deficiency in each year has been met by Commonwealth subsidy.

Details of the amounts paid in respect of subsidy on both superphosphate and nitrogenous fertilizers are shown in the table above.

(iv) *Dairy Industry.* The war-time demand for butter, cheese and processed milk products was such as to necessitate production being increased to the limit of existing resources. With this object in view the Commonwealth has subsidized production and so encouraged dairy farmers to maintain output at the highest level possible. The amounts paid since the introduction of the subsidy are shown above. These do not include the subsidies paid on the production of whole milk which is consumed directly and which amounted to £319,000 in 1943-44, £1,780,000 in 1944-45, £2,520,000 in 1945-46, £2,249,000 in 1946-47, £2,157,000 in 1947-48 and £564,000 in 1948-49. This subsidy was discontinued from 30th September, 1948.

(v) *Farmers' Debt Adjustment.* In addition to the assistance outlined above, the Loan (Farmers' Debt Adjustment) Act 1935 made provision for grants, totalling £12 million, to be made available to the States for the adjustment of farmers' debts. Of this amount, £10 million was allocated as follows:—New South Wales, £3,450,000; Victoria, £2,500,000; Queensland, £1,150,000; South Australia, £1,300,000; Western Australia, £1,300,000; and Tasmania, £300,000. The remaining £2 million was allocated in the same proportion, and was subject to review at a later date.

§ 21. Fertilizers.

1. *General.*—In the early days of settlement in Australia scientific cultivation was little understood. It was common, as in other new countries, for the land to be cropped continuously to a degree of exhaustion. This practice is very much less in evidence now than in the early days of Australian agricultural development. Under the guidance of the State Departments of Agriculture, scientific farming is now much more widely practised. The importance of fallowing, crop rotation, and the application of suitable fertilizers in adequate quantities is now appreciated by farmers. The introduction of the modern seed-drill acting also as a fertilizer-distributor has greatly facilitated the use of artificial manures and much land formerly regarded as useless for cultivation has now been made productive.

2. **Fertilizers Acts.**—In order to protect the users of artificial fertilizers, legislation has been passed in each of the States regulating the sale and prohibiting the adulteration of fertilizers. A list of these Acts and their main features is given in Official Year Book No. 12, p. 378.

3. **Imports.**—The Australian output of prepared fertilizers is derived chiefly from imported rock phosphates and is sufficient for local requirements.

The chief sources of Australia's normal supplies of rock phosphate were Nauru and the Gilbert Islands group. The war in the Pacific interrupted supplies from these sources and the bulk of the imports since 1941-42 have come from Algeria, Egypt and the Makatea Islands. During 1948-49, however, supplies from pre-war sources have been resumed on a large scale. Sodium nitrate is obtained chiefly from Chile.

The imports of manures during the five years ended 1947-48, compared with average imports for the period 1934-35 to 1938-39, are shown in the following table:—

FERTILIZERS : IMPORTS INTO AUSTRALIA.

Fertilizer.	Average 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Ammonium sulphate						
cwt.	521,804	27	113,459	647,110	551,730	376,689
£	214,509	198	98,880	458,823	458,858	337,470
Potash salts						
cwt.	212,813	66,590	90,547	145,049	126,941	216,977
£	82,220	61,132	88,122	155,940	147,022	206,231
Rock phosphate						
cwt.	12,701,938	6,042,101	9,468,506	13,285,672	14,520,198	14,032,030
£	775,840	550,889	1,214,143	1,898,373	2,089,026	1,862,846
Sodium nitrate						
cwt.	143,985	673,028	327,426	..	92,159	129,175
£	63,464	362,741	169,746	..	60,049	68,085
Other ..						
cwt.	68,603	68,452	4,942	106,938	6,074	54,854
£	7,657	38,942	8,364	18,997	11,307	38,259
Total						
cwt.	13,649,143	6,850,198	10,004,880	14,184,769	15,297,102	14,809,725
£	1,143,690	1,013,902	1,579,255	2,532,133	2,766,262	2,512,891

4. **Exports.**—The following table shows the exports of fertilizers (practically all of which are manufactured locally) during the same periods:—

FERTILIZERS : EXPORTS FROM AUSTRALIA.

Fertilizer.	Average 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Ammonium sulphate						
cwt.	3,267	423	4,636	3,484	2,471	2,640
£	1,130	397	4,469	6,125	1,996	1,961
Bone-dust ..						
cwt.	2,789	..	..	9	..	..
£	1,550	..	..	7	..	..
Rock phosphate						
cwt.	..	375	27	..	..	..
£	..	804	65	..	..	..
Sodium nitrate						
cwt.	18	100	84	11,243	104	80
£	24	141	85	12,927	374	137
Superphosphate						
cwt.	35,962	975	990	951	4,946	10,359
£	6,209	565	634	570	2,061	5,012
Other ..						
cwt.	54,489	10,008	4,582	3,198	10,674	1,286
£	25,498	13,566	6,581	6,389	7,076	1,269
Total						
cwt.	96,525	11,881	10,319	18,885	18,195	14,365
£	34,411	15,473	11,834	26,018	11,507	8,379

5. **Quantities Locally Used.**—Information regarding the area fertilized with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the year 1947-48 is given in the following table. Details of the area manured with natural manure (stableyard, etc.) are no longer collected.

AREA FERTILIZED AND QUANTITY OF FERTILIZERS USED, 1947-48.

State or Territory.	Area Fertilized (Acres).			Fertilizers Used (Tons).		
	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.
New South Wales	4,075,233	879,343	4,954,576	130,198	41,509	171,707
Victoria	3,769,125	4,461,025	8,230,150	157,817	244,826	402,643
Queensland	260,518	1,338	261,856	54,337	96	54,433
South Australia	3,377,126	1,390,858	4,767,984	152,357	71,896	224,253
Western Australia	3,900,493	2,004,612	5,905,105	190,840	101,883	292,723
Tasmania	185,061	322,477	507,538	23,032	18,913	41,945
Australian Capital Territory ..	7,747	9,795	17,542	373	497	870
Total	15,575,303	9,069,448	24,644,751	708,954	479,620	1,188,574

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the years 1943-44 to 1947-48, compared with the average for the five years ended 1938-39, are shown in the next table. These details include the quantity used in the top-dressing of pasture lands.

The serious diminution in the output of superphosphate during the war caused by the interruption of imports of rock phosphate necessitated the introduction of a system of rationing of supplies which adversely affected the yields from those crops which are mainly dependent upon the use of superphosphate.

QUANTITY OF ARTIFICIAL FERTILIZERS USED.

(Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Total.
Average 1934-35 to 1938-39	148,277	305,969	50,651	200,566	230,713	30,272	1	276	966,725
1943-44 ..	82,200	163,690	33,677	86,456	114,572	25,306	..	290	506,101
1944-45 ..	79,411	180,433	41,102	102,970	137,211	30,199	..	235	593,667
1945-46 ..	106,008	248,025	46,833	147,147	190,639	34,220	..	318	773,190
1946-47 ..	141,388	321,092	54,274	194,216	252,532	37,062	..	517	1,001,081
1947-48 ..	171,707	402,643	54,433	224,253	292,723	41,945	..	870	1,188,574

As mentioned in § 20 the Commonwealth Government has encouraged the use of artificial fertilizers by providing subsidies to primary producers.

6. **Local Production.**—Complete information regarding local production of fertilizers is not available. The number of firms engaged in the manufacture of chemical fertilizers in Australia for the year 1947-48 was 47, made up as follows:—New South Wales 14; Victoria, 8; Queensland, 7; South Australia, 7; Western Australia, 6; and Tasmania, 5. The production of superphosphate in Australia during 1947-48 amounted to 1,186,062 tons, the largest producing States being Victoria, Western Australia and South Australia.

§ 22. Ensilage.

1. **Government Assistance in Production.**—The various State Governments devote a considerable amount of attention to the education of the farming community in regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connexion with the design of the silos and the cutting and packing of the ensilage.

2. **Quantity Made.**—Information regarding the number of holdings on which ensilage was made and the quantity made during each of the seasons 1944-45 to 1947-48, together with respective averages for the five years ended 1938-39, is given in the following table:—

ENSILAGE MADE.

State.	Average 1934-35 to 1938-39.		1944-45.		1945-46.		1946-47.		1947-48.	
	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
New South Wales ..	1,321	109,278	(a)	39,830	1,110	73,598	788	51,783	1,670	119,453
Victoria ..	527	30,594	454	19,993	(a)	31,576	504	24,644	449	21,873
Queensland ..	172	10,291	(a)	11,519	258	12,775	(a)	13,146	(a)	15,635
South Australia ..	122	8,493	(a)	2,749	(a)	4,664	(a)	4,739	(a)	6,531
Western Australia ..	354	15,779	(a)	19,328	(a)	13,888	(a)	8,809	(a)	13,267
Tasmania ..	26	1,114	(a)	1,325	(a)	2,567	(a)	2,890	(a)	3,514
Australian Capital Territory ..	..	..	(a)	..	(a)	1,465	(a)	5	(a)	349
Australia ..	2,522	175,549	(a)	94,744	(a)	140,533	(a)	106,016	(a)	180,622

(a) Not available.

The drought of 1902-3 drew increased attention to the value of stocks of ensilage and during the four seasons ended 1909-10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The accumulated stocks proved of great value during the 1914 drought, though far less than would have been the case if more attention had been paid to production during the previous years when there was a surplus of green fodder. The quantities made since that date have fluctuated considerably, but the output increased up to 1939-40 in which year the production of 303,495 tons was the highest yet recorded. During subsequent seasons output has declined noticeably and reached the extremely low level of 94,744 tons during the drought year 1944-45.

3. **Stocks Held on Farms.**—Details of farm stocks of ensilage, which were collected for the first time as at 31st March, 1943, are shown in the following table as at 31st March, 1944 to 1948:—

ENSILAGE : FARM STOCKS.

(Tons.)

31st March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
1944 ..	100,859	24,319	18,676	4,944	6,634	882	890	157,204
1945 ..	54,268	15,226	14,688	2,151	5,591	899	155	92,978
1946 ..	73,371	27,675	16,926	3,186	3,832	3,925	1,740	130,655
1947 ..	60,348	30,662	11,298	2,658	2,916	3,930	100	111,912
1948 ..	109,681	29,649	18,116	5,265	3,987	4,379	491	171,568

§ 23. Agricultural Colleges and Experimental Farms.

In most of the States agricultural colleges and experimental farms have been established with a view to the promotion of more scientific methods in agriculture stock-breeding and dairying. In the colleges, and on some of the farms, provision is made for the accommodation of pupils to whom both practical and theoretical instruction is given by experts in various branches of agriculture. Analyses of soils and fertilizers are made, manures are tested, and elementary veterinary science, etc., are taught, while general experimental work is carried on with cereal and other crops, not merely for the purpose of showing that it is practicable to produce certain crops in a given place, but to show also how it is possible to make farming pay in the locality. Opportunities are afforded for practice in general agricultural work, and instruction is given in the conservation of fodder, in cheese and butter making, in the management breeding and preparation for the market of live-stock, in the eradication of pests and weeds, and in carpentering, blacksmithing and other trades.

Expert lecturers visit the various agricultural and dairying centres, and there is a wide distribution of periodical agricultural gazettes and bulletins.

§ 24. Employment in Agriculture.

Particulars relating to the number of males employed in agriculture are available up to 1941-42 in Official Year Book No. 36, page 852, and also in previous issues. Similar details for later years are not available, but statistics of permanent employment on rural holdings may be found in § 25 following.

§ 25. Number and Area of Rural Holdings and Permanent Employment Thereon.

1. General.—The statistical data included in the chapters relating to agricultural, pastoral and dairying activities are obtained at an annual census taken in each State under the direction of the State Statisticians. This census is taken as early as practicable after the conclusion of the main harvest and covers every holding within the boundaries of each State.

A holding in Australia has been defined by the States on a more or less uniform basis and discrepancies which exist are not of sufficient importance to vitiate any comparisons. For the purpose of these statistics, a holding may be defined as land of one acre or more in extent, used in the production of agricultural produce, the raising of live stock or the products of live stock.

With the exception of Queensland, particulars of the number of holdings included in these censuses are available for all States over a series of years. It was not until 1938-39, however, that a complete tabulation became available for Queensland.

2. *Number and Area.*—The following table shows the number and area of the holdings in each State for the years 1938-39 and 1943-44 to 1947-48.

RURAL HOLDINGS : NUMBER AND AREA.

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australian Capital Territory.	Total.
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NUMBER OF RURAL HOLDINGS.

1938-39 ..	75,365	72,452	41,503	31,280	21,052	11,680	204	253,536
1943-44 ..	73,074	70,961	42,457	27,826	18,345	11,438	202	244,303
1944-45 ..	74,566	70,856	42,615	27,867	18,737	12,173	201	247,015
1945-46 ..	74,173	70,652	42,511	27,635	18,400	11,991	221	245,583
1946-47 ..	74,671	70,750	42,173	28,040	19,064	11,980	217	246,895
1947-48 ..	74,669	70,910	42,070	27,901	19,141	11,852	215	246,758

TOTAL AREA OF RURAL HOLDINGS.

('000 ACRES.)

1938-39 ..	174,660	40,791	317,782	144,682	211,720	6,778	371	896,784
1943-44 ..	171,878	41,275	348,830	144,526	204,030	6,393	363	917,295
1944-45 ..	170,080	40,830	348,648	137,386	207,987	6,664	382	911,977
1945-46 ..	169,380	40,523	354,944	142,505	206,001	6,479	376	920,208
1946-47 ..	169,498	40,056	357,551	146,173	211,589	6,401	374	931,642
1947-48 ..	169,198	39,345	358,621	142,393	208,693	6,183	368	924,801

3. *Analysis of Holdings.*—(i) *General.* It is not possible to classify these holdings according to the purpose for which they are used. This arises from a number of factors, the chief of which is mixed farming. The general trend in Australia is for farmers to diversify their activities and consequently it is very difficult to determine whether the purpose of many holdings is mainly agricultural, pastoral or dairying, or any of these in combination.

(ii) *New South Wales.* Such an analysis is made in New South Wales but, as pointed out by the Statistician, it should be regarded as an approximation. It is compiled from the description of purpose given by the occupier of the holding at the time of the Census. This tabulation reveals that there were 71,105 holdings so classified in New South Wales during 1945-46. Of this number 10,447 described their main purposes as agricultural only, 21,590 as pastoral only, 12,157 dairying only, 3,973 as poultry, pig or bee farming, while the main purpose of the remaining 22,998 holdings was stated to be a combination of two or more of these activities. Holdings used mainly for residential or other purposes but which were used partly for the production of rural products have been omitted. These numbered 3,008 during 1945-46.

4. Special Tabulation Relating to Rural Holdings, 1947-48.—With the co-operation of State Statisticians, a series of special tabulations relating to rural holdings was undertaken for all States for the year 1947-48. The tabulations, which covered a series of size tabulations of all rural holdings, holdings growing wheat for grain and those carrying live stock, have been published in detail in the *Production Bulletin* No. 42, 1947-48, Part II.—*Primary Industries and Total Recorded Production*. The following table shows particulars of the number and area of rural holdings classified according to the size of holdings.

RURAL HOLDINGS : NUMBER AND AREA CLASSIFIED IN AREA SERIES, 1947-48.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
NUMBER OF HOLDINGS.								
1- 19..	9,419	9,031	2,464	3,628	3,100	1,557	19	29,218
20- 49..	5,659	8,087	2,442	3,005	1,124	1,612	17	21,946
50- 99..	5,313	7,692	4,215	2,162	674	2,086	11	22,153
100- 199..	8,394	11,521	8,149	2,139	1,540	2,708	7	34,458
200- 299..	5,365	6,356	4,359	1,396	999	1,241	8	19,724
300- 399..	3,876	5,251	3,543	1,146	668	628	7	15,119
400- 499..	3,138	3,233	2,046	1,228	486	384	5	10,520
500- 599..	2,744	2,635	1,365	1,131	402	229	4	8,510
600- 699..	2,818	3,252	1,500	1,107	335	172	10	9,194
700- 799..	1,916	1,895	770	807	293	121	1	5,803
800- 899..	1,898	1,487	577	768	343	100	9	5,182
900- 999..	1,687	1,447	533	740	475	74	5	4,961
1,000- 1,999..	9,721	5,995	2,762	4,243	3,611	408	56	26,796
2,000- 4,999..	7,697	2,345	2,205	2,930	3,822	314	44	19,357
5,000- 9,999..	2,540	445	1,166	769	654	133	7	5,714
10,000-19,999..	1,135	144	1,190	286	115	45	3	2,918
20,000-49,999..	822	70	1,587	178	50	34	2	2,743
50,000-99,999..	346	15	626	78	43	6	..	1,114
100,000 and over	181	9	571	160	407	..	..	1,328
Total ..	74,669	70,910	42,070	27,901	19,141	11,852	215	246,758

AREA OF HOLDINGS.

('000 ACRES.)

1- 19..	74	88	22	34	24	14	..	256
20- 49..	184	254	81	94	34	53	1	701
50- 99..	383	556	313	155	47	150	1	1,605
100- 199..	1,198	1,636	1,195	306	220	373	1	4,929
200- 299..	1,295	1,544	1,057	341	243	296	2	4,778
300- 399..	1,322	1,784	1,196	396	225	212	2	5,137
400- 499..	1,394	1,445	910	550	215	168	2	4,684
500- 599..	1,494	1,436	737	618	217	123	2	4,627
600- 699..	1,813	2,084	958	712	214	110	6	5,897
700- 799..	1,425	1,416	570	602	218	89	1	4,321
800- 899..	1,603	1,252	484	649	289	83	8	4,368
900- 999..	1,598	1,376	502	702	453	70	5	4,706
1,000- 1,999..	13,561	8,251	3,763	6,007	5,217	562	77	37,438
2,000- 4,999..	23,762	6,712	6,777	8,798	11,324	969	120	58,462
5,000- 9,999..	17,096	2,981	8,156	5,205	4,207	908	52	38,605
10,000-19,999..	15,402	2,005	17,212	4,129	1,536	593	35	40,912
20,000-49,999..	25,900	2,155	49,125	5,481	1,496	993	53	85,596
50,000-99,999..	23,837	918	43,305	5,548	3,161	417	..	77,186
100,000 and over	35,707	1,152	221,958	102,003	179,353	..	..	549,593
Total ..	169,198	39,345	358,621	142,393	208,693	6,183	368	924,801

(a) Excludes Northern Territory.

5. **Permanent Employment on Rural Holdings.**—The following table shows for each State of Australia the number of persons permanently engaged full-time on rural holdings as at 31st March, 1948.

**RURAL HOLDINGS: PERMANENT FULL-TIME EMPLOYMENT AS AT
31st MARCH, 1948.**

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
MALES.								
Owners, Lessees or Share-farmers	73,400	66,606	44,007	27,225	18,355	11,249	150	240,992
Relatives of Owner, Lessee or Sharefarmer over 14 years of age, not receiving wages or salary ..	9,074	7,542	5,412	2,423	2,379	1,322	19	28,171
Employees, including Managers and Relatives working for wages or salary	30,578	18,030	20,116	8,419	9,107	4,136	116	90,502
Total	113,052	92,178	69,535	38,067	29,841	16,707	285	359,665

FEMALES.

Owners, Lessees, etc. } Relatives of Owner, Lessee } etc.	9,341	6,150	12,142	5,005	5,984	1,328	40	39,990
Employees, including Managers and Relatives working for wages or salary	1,530	1,203	2,753	818	931	270	14	7,519
Total	10,871	7,353	14,895	5,823	6,915	1,598	54	47,509

TOTAL PERSONS ENGAGED.

Owners, Lessees, etc. } Relatives of Owner, } Lessee, etc.	91,815	80,298	61,561	34,653	26,718	13,899	209	309,153
Employees, including Managers and Relatives working for wages or salary	32,108	19,233	22,869	9,237	10,038	4,406	130	98,021
Total	123,923	99,531	84,430	43,890	36,756	18,305	339	407,174

The next table shows for Australia as a whole the number of persons permanently engaged full-time on rural holdings as at 31st March of the six years 1943 to 1948 for which this information was collected.

RURAL HOLDINGS : PERMANENT FULL-TIME EMPLOYMENT, AUSTRALIA.

Particulars.	As at 31st March—					
	1943.	1944.	1945.	1946.	1947.	1948.
Males—						
Owners, Lessees or Share-farmers	205,906	220,013	227,796	233,593	240,753	240,992
Relatives of Owner, Lessee or Sharefarmer over 14 years of age, not receiving wages or salary ..	33,552	34,980	37,760	34,241	32,233	28,171
Employees, including managers and relatives working for wages or salary	75,698	75,040	73,816	82,582	84,300	90,502
Total, Males ..	315,156	330,033	339,372	350,416	357,286	359,665
„ Females (a) ..	68,000	60,142	58,979	54,513	48,844	47,509
Total Persons engaged	383,156	390,175	398,351	404,929	406,130	407,174

(a) Total permanently engaged full-time.

CHAPTER XXI.

FARMYARD, DAIRY AND BEE PRODUCTS.

§ 1. Introductory.

1. *General.*—The introduction of cattle into Australia and the early history of the dairying industry are referred to in some detail in earlier issues of this publication. It may here be noted that the original stock has been crossed with specially imported stud cattle, while further judicious crossings of strains have resulted in an increased and improved milk supply. In Australia dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter, and in certain districts rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the wider application of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with herd testing and effective State supervision, the dairying industry has shown rapid expansion. It has been demonstrated that Australian production and marketing methods do not adversely affect the vitamin content of the butter and that the loss during cold storage even for as long as two years is insignificant.

2. *Mixed Farming.*—Dairying is not, as formerly, wholly confined to agriculturists, since many graziers in a large way of business also give it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established. The extent to which dairy cattle were run in conjunction with pig raising and wheat growing in 1947-48 is shown in the relevant tables published in the section "Special Tabulations Relating to Rural Holdings: 1947-48" of *Production Bulletin No. 42—Part II.—Primary Industries and Total Recorded Production*.

3. *Employment.*—The numbers of persons employed in primary industry are ascertained at the annual census of rural production. The particulars collected are in respect of those persons who were permanently engaged in the actual work of the farm and include owners, lessees, tenants or sharefarmers, relatives over 14 years of age not receiving wages, and other permanent employees, including managers and relatives, working for wages or salary. Details of the numbers so engaged are given in Chapter XX.—*Agricultural Production*, § 25.

For the years up to 1939-40, information was also collected which enabled the classification of each holding according to the chief purpose for which it was used, thus obtaining a distribution of employment in the three main classes, viz., Agriculture, Pastoral and Dairying. However, because of difficulties in determining with precision the chief purpose for which holdings are used, this information has since been omitted from the schedules. Consequently it has not been possible to continue to compile details of employment in the dairying industry from data obtained from this source.

Details of the number of persons who described themselves at the population census of 30th June, 1947 as being engaged in dairy farming are shown in the following table:—

EMPLOYMENT IN DAIRY FARMING : CENSUS, 30th JUNE, 1947.

Sex.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	A.C.T.	N. Ter.	Aust.
Males ..	27,909	30,511	25,993	5,079	4,905	2,054	53	2	96,508
Females ..	2,753	3,239	2,847	624	372	176	7	..	10,018
Total ..	30,662	33,750	28,840	5,703	5,277	2,230	62	2	106,526

4. Growth of the Dairying Industry.—The following table gives some indication of the growth of the dairying industry since 1918-19 :—

DAIRYING INDUSTRY : AUSTRALIA.

Year.	Number of Dairy Cows.		Production of Butter.	Production of Cheese.	Milking Machines (No. of Stands).
	In Milk.	Dry.			
1918-19..	1,319,588	582,448	Tons. 81,162	Tons. 10,621	(a)
1928-29..	1,744,728	600,342	129,817	13,490	(a)
1938-39..	2,600,707	608,812	203,500	29,304	(a)
1944-45..	2,277,718	861,673	141,963	34,620	109,561
1945-46..	2,253,566	770,910	150,363	41,238	116,806
1946-47..	2,227,022	786,119	143,308	42,350	125,720
1947-48..	2,267,221	818,044	162,055	41,478	134,774
1948-49..	2,339,885	818,725	165,830	43,202	144,916

(a) Not available.

5. Official Supervision of Dairying Industry.—Dairy experts of the various State Agricultural Departments give instruction in approved methods of production, and inspect animals, buildings and marketable produce. A high standard of cleanliness, both of *personnel* and *materiel*, prevails.

The export trade is regulated by the terms of the Commonwealth Commerce (Trade Descriptions) Act 1905-1933, and regulations thereunder. It will be sufficient to state here that the true trade description, etc., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are given a certificate by the inspector.

§ 2. Dairy Cattle and Dairy Products.

1. Dairy Herds.—Due to the lack of uniformity in the schedules used by the several States in the collection of live-stock statistics, it is not possible to measure with precision the growth of the dairy herds of Australia prior to 1943. However, statistics of dairy cows, which provide a reliable measurement of this development, show that in 1918-19 there were 1,902,036 dairy cows in milk and dry, compared with 2,345,070 in 1928-29 and 3,209,510 in 1938-39. This latter figure was sustained until March, 1944, but has since declined, the number recorded at 31st March, 1949, being 3,158,610. In New South Wales, Victoria, South Australia and Tasmania the proportion of dairy cattle to all cattle is high. In Queensland, the Northern Territory and Western Australia there is a greatly preponderating number of other cattle, the main object in these areas being the production of beef. Dairying, however, has developed greatly in southern Queensland since 1914-15, and the largest contribution to the Australian increase in dairy production has been made by this State. Since 1930 the number of dairy cows has declined in both Queensland and New South Wales while significant increases have occurred in Victoria and South Australia. The numbers of dairy cows for 1945 to 1949 shown in the following table refer to those recorded by farmers as being in milk and dry as at 31st March. The figures shown for the years 1935 to 1939 cover the same categories, but the period differs in some States (*see* footnote (a)). To this extent the figures lack comparability.

NUMBER OF CATTLE AND DAIRY COWS (IN MILK AND DRY).

State.		Average, 1935-39. (a)	31st March—				
			1945.	1946.	1947.	1948.	1949.
N.S.W.(b)	{ All Cattle ..	3,054,164	3,144,701	3,116,834	2,983,093	3,129,710	3,252,752
	{ Dairy Cows..	1,024,761	993,157	865,782	849,707	862,041	872,431
Victoria	{ All Cattle ..	1,892,465	1,903,110	1,827,087	2,060,061	2,174,203	2,224,543
	{ Dairy Cows..	912,621	859,200	811,399	877,205	896,886	930,252
Queensland	{ All Cattle ..	6,047,726	6,623,112	6,542,210	5,945,285	5,975,400	5,991,797
	{ Dairy Cows..	924,875	1,001,378	987,835	913,656	946,174	963,473
South Australia	{ All Cattle ..	331,488	391,323	374,096	423,980	445,287	461,086
	{ Dairy Cows..	154,870	161,953	150,101	163,992	166,954	172,865
W. Australia	{ All Cattle ..	796,473	852,563	833,567	811,949	815,610	864,131
	{ Dairy Cows..	121,127	137,004	133,945	131,711	132,305	133,219
Tasmania	{ All Cattle ..	260,267	224,668	216,306	220,119	244,107	266,419
	{ Dairy Cows..	93,768	75,135	73,913	75,118	79,135	84,433
Nor. Territory	{ All Cattle ..	893,925	984,370	960,039	972,990	991,429	1,052,811
	{ Dairy Cows..	(c)	(c)	(c)	(c)	(c)	(c)
Aust. Cap. Ter.	{ All Cattle ..	8,261	9,320	7,867	9,169	8,748	10,071
	{ Dairy Cows..	1,019	1,264	1,471	1,752	1,770	1,937
Australia	{ All Cattle ..	13,284,769	14,133,167	13,878,006	13,426,646	13,784,584	14,123,610
	{ Dairy Cows..	3,232,981	3,139,391	3,024,476	3,013,141	3,085,265	3,158,610

(a) As at 31st March for New South Wales and Australian Capital Territory; 1st March for Victoria; 1st January for Queensland, South Australia, Western Australia and Tasmania. (b) Includes other milking cows not in registered dairies. (c) Not available.

In the next table the dairy cattle in each State are shown in various categories as at 31st March, 1947, 1948 and 1949. Information in this detail was not collected uniformly in all States prior to 1943.

NUMBER OF DAIRY CATTLE.

State.	31st March.	Dairy Cows.		Dairy Heifers 1 year and over.	Dairy Calves under 1 year.	Dairy Bulls.	Total Dairy Cattle.
		In Milk.	Dry.				
New South Wales	1947	(a) 679,672	170,935	205,489	148,037	24,404	1,227,637
	1948	(a) 688,867	173,174	199,707	154,167	23,846	1,239,761
	1949	(a) 696,590	175,841	199,884	163,018	24,024	1,259,357
Victoria	1947	646,823	230,382	253,131	245,783	35,509	1,411,628
	1948	630,079	257,807	298,574	243,613	37,306	1,476,379
	1949	688,514	241,738	304,795	239,457	38,788	1,513,292
Queensland	1947	653,940	259,716	232,086	158,203	28,177	1,332,122
	1948	694,244	251,930	213,451	195,086	27,853	1,382,564
	1949	700,908	262,565	225,756	205,333	28,269	1,422,831
South Australia	1947	119,138	44,854	42,593	47,364	8,118	262,067
	1948	112,726	54,228	53,159	46,414	8,604	275,131
	1949	118,823	54,042	54,521	42,925	8,710	279,021
Western Australia	1947	66,011	65,700	40,766	45,206	5,869	223,552
	1948	68,134	64,171	40,536	46,509	6,124	225,474
	1949	65,631	67,588	40,859	50,033	5,882	229,993
Tasmania	1947	60,165	14,953	22,712	30,905	3,530	132,265
	1948	62,724	16,411	25,296	35,842	3,768	144,041
	1949	67,849	16,584	27,329	39,117	4,243	155,122
Australian Capital Territory	1947	1,273	479	854	298	38	2,942
	1948	1,447	323	761	268	32	2,831
	1949	1,570	367	570	485	30	3,022
Australia(b)	1947	2,227,022	786,119	797,631	675,796	105,645	4,592,213
	1948	2,267,221	818,044	831,484	721,899	107,533	4,746,181
	1949	2,339,885	818,725	853,714	740,368	109,946	4,802,638

(a) Includes other milking cows not in registered dairies.

(b) Excludes Northern Territory.

A graph showing the distribution of dairy cattle in Australia at 31st March, 1948 appears on page 896 of this Year Book.

2. **Size of Dairy Herds.**—A series of special tabulations relating to rural holdings undertaken for all States for the year 1947-48 covered, *inter alia*, a classification of holdings with dairy cattle according to size of herd, details of which are shown below. Full details of the tabulations showing the following size classifications of holdings with dairy cattle are published in *Production Bulletin* No. 42—Part II.—*Primary Industries and Total Recorded Production*:—(i) dairy cattle holdings classified in area series and according to size of herd; (ii) dairy cattle holdings also growing wheat for grain, similarly classified, and (iii) dairy cattle holdings also carrying pigs classified according to size of the respective herds.

It should be specially noted that the particulars shown below for New South Wales relate to registered dairies only and to this extent are not comparable with the details for other States, which cover all holdings with dairy cattle.

HOLDINGS CARRYING DAIRY CATTLE: CLASSIFICATION ACCORDING TO SIZE OF HERD, 31st MARCH, 1948.

Size of Herd.	N.S.W. (a)	Vic.	Qld.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust. (b)
Under 5	104	16,333	5,661	5,540	5,206	3,698	76	36,618
5 and under 10	262	9,155	2,728	4,657	2,681	1,971	37	21,501
10 " " 15	428	4,447	1,473	2,764	992	990	9	11,103
15 " " 20	528	2,784	1,159	1,463	530	616	3	7,092
20 " " 30	1,373	3,947	2,235	1,567	822	774	4	10,722
30 " " 50	4,264	6,110	5,044	1,498	1,171	730	1	18,827
50 " " 100	7,997	8,329	8,541	955	920	481	..	27,232
100 and over	2,517	2,504	3,301	124	318	132	12	8,908
Total	17,473	53,619	30,142	18,568	12,658	9,401	142	142,003

(a) Registered dairies only.

(b) Excludes Northern Territory.

3. **Factory System.**—(i) *General.* Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories has resulted in a considerable reduction in the cost of manufacture, since improved appliances such as refrigerators, etc., may be profitably worked at the larger establishments. The product is also of a more uniform quality, and few farmers prefer to convert the cream rather than send it to the factory. Formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, but separator butter requires less than $2\frac{1}{2}$ gallons.

(ii) *Number of Factories.* The factories in Australia for the manufacture of butter, cheese and condensed milk numbered 440 in 1947-48. They were distributed among the States as follows:—New South Wales, 107; Victoria, 148; Queensland, 101; South Australia, 46; Western Australia, 18; and Tasmania, 29. More details regarding numbers of factories, output, etc., are given in Chapter XXIV.—“Manufacturing Industry”.

4. **Butter and Cheese—Stabilization Schemes.**—(i) *Voluntary Plan.* During the period from January, 1926 to April, 1934, a voluntary scheme known as the “Paterson Plan” was in operation and had the effect of stabilizing the price of butter in Australia. The scheme provided for the payment of a levy on all butter produced in Australia sufficient to pay a bounty on export which ranged from 3d. to 4½d. per lb. The local price was raised by the amount of the bounty per unit while the return to the producer

on all butter produced was increased by approximately the difference between the rate of bounty paid and the rate of levy charged. The scheme, which continued until 25th April, 1934, did not receive the full support of all butter manufacturers.

(ii) *Compulsory Plan.* On 1st May, 1934 the "Paterson Plan" was superseded by a compulsory price equalization plan. The object of this scheme was to maintain local prices for butter and cheese independently of prices realized for exports. The Dairy Produce Act was passed by the Commonwealth Parliament towards the end of 1933, and at the same time complementary legislation was passed by the Parliaments of New South Wales, Victoria, Queensland and Tasmania. As a result of a referendum among producers held in 1936, Tasmania withdrew from the plan and the State Act expired. In the Commonwealth Act power was given to regulate interstate trade while the State Acts were designed to regulate trade within the respective States. The authority set up by each State Act fixed the proportion of the State's production to be sold within the State, and the Commonwealth Act protected this allocation by regulating the movement of butter and cheese from one State to another and so ensured the removal from the Australian market of the surplus production.

The compulsory plan was invalidated by the decision in 1936 of the Privy Council which declared in the James (Dried Fruits) Case that the Commonwealth had no power under the Constitution to regulate trade between the States.

(iii) *Equalization Scheme.* Since the Privy Council decision, the butter price stabilization scheme has continued to operate by voluntary action based on the agreements between the manufacturers and the Commonwealth Dairy Produce Equalisation Committee Limited. The Committee, which comprises members of the State Dairy Products Boards and other persons representing the industry, enters into agreements with manufacturers to secure to them equal rates from sales of butter and cheese, and for this purpose may fix basic prices at which these products sold in Australia or abroad are to be taken into account. The effect is that local and export trade are distributed in equitable proportions among the manufacturers by means of quotas. The Committee fixes basic prices and equalizes returns to factories through an Equalisation Fund. The States originally participating in the scheme were New South Wales, Victoria, Queensland, Tasmania in respect of both butter and cheese, and South Australia in respect of cheese. South Australia and Western Australia entered the scheme in respect of butter on 1st April, 1946 and Western Australia extended its participation to include cheese in January, 1947.

The home consumption prices of butter and cheese were fixed by the Commonwealth Prices Commissioner up to 19th September, 1948, from which date prices have been controlled by State Governments.

5. *Commonwealth Subsidies.*—(i) *Butter, Cheese and Processed Milk Products.* Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided subsidies on milk supplied for the manufacture of butter, cheese and processed milk products. Subsidies were paid on a seasonal basis prior to 1st April, 1946, but from that date have been on a flat rate basis. Subsidies are distributed by the Commonwealth Dairy Produce Equalisation Committee Limited through factories to milk producers by payments on butter, cheese and processed milk products manufactured. Subsidy on milk supplied for the manufacture of processed milk products was discontinued from 1st July, 1948.

The following table shows particulars of the rates realized on local, interstate and overseas sales and the average equalization and subsidy rates in operation for the years ended June, 1939 and 1946 to 1950 in respect of butter and cheese.

BUTTER AND CHEESE : RATES REALIZED ON SALES, AVERAGE EQUALIZATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRY INDUSTRY ASSISTANCE ACTS.

(Source : Commonwealth Dairy Produce Equalisation Committee Limited.)

(Rates s. d. per cwt.)

Year ended 30th June.	Rates Realized on Sales.			Average Equalization Rate.	Rate of Subsidy.	Overall Return to Manu- facturers.
	Local.	Interstate.	Overseas.			
BUTTER.						
1939.. ..	154 5.5	146 5.5	121 7.5	136 3.5	..	136 3.5
1946.. ..	161 8.5	150 6.8	182 5.5	171 3.3	33 4.0	204 7.3
1947.. ..	162 1.6	150 4.1	210 3.8	183 1.7	30 9.6	213 11.3
1948.. ..	178 1.9	174 8.8	243 5.6	210 2.3	35 3.7	245 6.0
1949.. ..	(a)	(a)	(a)	b236 0.0	b 30 6.0	266 6.0
1950—						
July-Dec. ..	(a)	(a)	(a)	b257 0.0	b 35 3.0	292 3.0
Jan.-June ..	(a)	(a)	(a)	b244 0.0	b 50 0.0	294 0.0

CHEESE.

1939.. ..	(c) 94 8.6	59 3.2	71 7.6	..	71 7.6
1946.. ..	(c) 104 0.1	102 11.0	101 1.3	17 11.6	119 0.9
1947.. ..	(c) 103 11.2	116 5.2	109 2.2	13 8.9	122 11.1
1948.. ..	106 8.4	133 1.5	119 9.3	19 7.6	139 4.9
1949.. ..	(a)	(a)	b134 0.0	b 15 4.9	149 4.9
1950—					
July-Dec. ..	(a)	(a)	b145 6.0	b 20 3.0	165 9.0
Jan.-June ..	(a)	(a)	b136 0.0	b 30 6.5	166 6.5

(a) Not yet available. (b) Interim rates. (c) Lower rates were determined for cheese sold in these years for processing for local consumption.

Following representations by industry organizations, the Commonwealth Government established the Joint Dairy Industry Advisory Committee in November, 1946, comprising a chairman nominated by the Government, four representatives of Commonwealth Government Departments and four industry representatives from the several States. The Committee's functions, broadly, are to advise and assist in conducting cost and other surveys of dairy farm production and to act as an advisory body to the Government in these matters. Since 1st April, 1947, the rates of over-all return to milk producers determined by the Commonwealth Government for the purpose of subsidy payments have been based on recommendations made by the Committee following surveys of production costs in the dairy industry.

From 1st July, 1948, export prices for butter, including those operating under the United Kingdom Dairy Products Contract have exceeded the f.o.b. equivalent of the rate of over-all return to factories, and the Commonwealth Government, with the concurrence of the Australian Dairy Produce Board has established a Dairy Prices Stabilization Fund, in which excess returns from exports are placed for the purpose of stabilizing returns from exports for the period of the contract. Since July, 1948, subsidy payments have been applied wholly to butter and cheese sold for consumption in Australia.

(ii) *Whole Milk.* In addition to the subsidies referred to above, the Commonwealth Government has also subsidized the production of whole milk consumed directly. The subsidy rates vary according to States, regions within the State and the seasonal period.

Commonwealth subsidy on whole milk was paid during the year 1948-49 in respect of milk supplied up to 30th September, 1948, but was discontinued after that date. Details of the amounts distributed during each year are shown in the following table:—

COMMONWEALTH SUBSIDY ON WHOLE MILK FOR DIRECT HUMAN CONSUMPTION.
(£'000.)

Year ended June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
1944 ..	35	180	94	..	..	10	..	319
1945 ..	734	510	210	212	85	25	10	1,786
1946 ..	1,042	763	295	233	122	55	10	2,520
1947 ..	901	663	308	187	151	32	7	2,249
1948 ..	986	643	186	170	121	42	9	2,157
1949 ..	204	283	60	4	(a) 12	20	5	564

(a) Net refund of amounts paid in previous years.

6. **Total Dairy Production.**—The dairy production for each State in 1947-48 is shown below:—

DAIRY PRODUCTION, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	A.C.T.	Total.
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MILK ('000 GAL.).

Used for—								
Butter ..	(a) 172,397	(b) 275,652	(c) 213,333	43,489	33,281	24,863	34	763,049
Cheese ..	5,973	34,786	21,547	24,513	2,261	1,041	..	90,121
Condensing and concentrating ..	20,201	51,311	(d)	(d)	(d)	(d)	..	(e) 78,113
Other purposes ..	96,799	66,820	(f) 37,911	(f) 24,496	(f) 14,821	(f) 7,032	544	241,822
Total ..	295,370	428,569	272,791	92,498	50,363	32,936	578	1,173,105

BUTTER (TONS).

In Factories On Dairy and other Farms(j)	(g) 33,958	(h) 56,717	(i) 46,454	9,043	6,974	4,441	..	157,587
	1,786	859	592	572	266	388	5	4,468
Total ..	35,744	57,576	47,046	9,615	7,240	4,829	5	162,055

CHEESE (TONS).

In Factories On Dairy and other Farms(j)	2,637	16,167	(k) 9,641	11,530	1,019	447	..	41,441
	5	11	5	..	4	12	..	37
Total ..	2,642	16,178	9,646	11,530	1,023	459	..	41,478

CONDENSED, CONCENTRATED AND POWDERED MILK, ETC. (TONS).

In Factories	21,267	59,813	(d)	(d)	(d)	..	(e) 92,296
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(a) Includes 4,313,373 gallons of milk, the produce of New South Wales, sent to factories in Victoria and Queensland. (b) Includes 785,842 gallons of milk, the produce of Victoria, sent to factories in New South Wales.

(c) Includes 689,989 gallons of milk, the produce of Queensland, sent to factories in New South Wales. (d) Not available for publication. (e) Includes particulars of States marked (d).

(f) Includes milk used in the production of condensed, concentrated and powdered milk, etc. (g) Includes 315 tons of butter made from cream, the produce of Victoria and Queensland.

(h) Includes 796 tons of butter made from cream, the produce of New South Wales. (i) Includes 132 tons of butter made from cream, the produce of New South Wales. (j) Estimated. (k) Includes 181 tons of cheese made in establishments not classified as factories.

7. **Whole Milk.**—(i) *Production and Utilization.* During the five years ended 1938-39 approximately 80 per cent. of Australia's milk supply was used for butter-making, 4 per cent. for cheese manufacture, 2 per cent. for condensary products and 14 per cent. for fluid consumption and other purposes. There has since been a considerable decline in the proportion of milk used for butter-making with corresponding increases in the quantities used for other purposes. In 1948-49, 64.4 per cent. of the total milk supply was used for butter, 7.7 per cent. for cheese, 7.2 per cent. for condensary products and 20.7 per cent. for other purposes.

Details of the production of whole milk for various purposes are shown in the following table for each year 1944-45 to 1948-49 in comparison with the average for the years 1934-35 to 1938-39 :—

PRODUCTION AND UTILIZATION OF WHOLE MILK : AUSTRALIA.

('000 gallons.)

Year.	Total Production.	Quantity used for—			
		Butter (Factory and Farm).	Cheese (Factory and Farm).	Condensary Products.	Other purposes.
Average, 1934-35 to 1938-39	1,149,559	913,754	48,595	28,116	159,094
1944-45	1,012,830	670,206	76,533	62,440	203,651
1945-46	1,077,469	701,819	89,555	65,313	220,781
1946-47	1,079,640	678,293	91,086	70,450	239,811
1947-48	1,173,105	763,049	90,121	78,113	241,822
1948-49	1,212,644	781,230	93,720	87,653	250,041

In the following table, particulars of production of whole milk in the several States are shown for the years 1944-45 to 1948-49, compared with the average for the five years ended 1938-39. Victoria is the principal milk-producing State and in 1948-49 output from that State, viz., 462.4 million gallons, represented 38.1 per cent. of total production. Output from New South Wales was 291.9 million gallons or 24.1 per cent. of the total and that of Queensland 277.2 million gallons (22.9 per cent.). Production in the remaining States accounted for 14.9 per cent. of the total Australian output.

TOTAL PRODUCTION OF WHOLE MILK.

('000 gallons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Average, 1934-35 to 1938-39 ..	331,963	402,447	278,226	63,538	40,394	32,659	332	1,149,559
1944-45	262,939	360,501	247,253	72,154	40,416	29,184	983	1,012,830
1945-46	278,885	375,639	260,390	79,370	43,004	30,714	467	1,077,469
1946-47	254,074	445,536	207,465	93,944	46,038	32,080	483	1,079,640
1947-48	295,370	428,569	272,791	92,498	50,363	32,936	578	1,173,105
1948-49	291,915	462,446	277,152	91,319	50,612	38,541	659	1,212,644

(ii) *Production per Cow.* The annual quantity of milk produced per dairy cow reaches as high as 1,000 gallons, varying greatly with breed, locality and season. For the whole of Australia for all dairy cows and for all seasons prior to 1916 it averaged considerably under 300 gallons per annum. In recent years not only has there been an improvement in the quality of the cattle, but the application of scientific methods has been continually extended, and the 300-gallon average has been exceeded in each year since 1924, the yield of 392 gallons in 1931 constituting a record. The annual average yields per cow given in the following table are based on the number of dairy cows which were in milk during any part of the year. The average given is, therefore, below that for cows which were yielding during the greater part of the year. It should be noted

that there are many difficulties attending the collection of particulars of the total quantity of milk obtained during any year. In addition, there is the further difficulty of ascertaining with reasonable accuracy the average number of cows in milk during the same period. The average yield per cow shown hereunder may be accepted as sufficiently reliable to show the general trend :—

MILK PRODUCTION.

Heading.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia (b)
Average, 1934-35 to 1938-39—								
Dairy Cows(a) .. No.	1,030,441	913,635	909,006	154,349	120,767	93,764	958	3,222,920
Production '000 gal.	331,963	402,447	278,226	63,538	40,394	32,659	332	1,149,559
Av. per cow .. gal.	322	440	306	412	334	348	347	357
1944-45—								
Dairy Cows(a) .. No.	911,146	866,998	1,012,118	161,815	137,552	75,224	1,258	3,166,111
Production '000 gal.	262,939	360,501	247,253	72,154	40,416	29,184	383	1,012,830
Av. per cow .. gal.	289	416	244	446	294	388	304	320
1945-46—								
Dairy Cows(a) .. No.	884,469	835,300	994,606	156,027	135,475	74,689	1,368	3,081,934
Production '000 gal.	278,885	375,039	269,390	79,370	43,004	30,714	467	1,077,469
Av. per cow .. gal.	315	450	271	509	317	411	341	350
1946-47—								
Dairy Cows(a) .. No.	857,745	844,302	950,745	157,047	132,828	74,530	1,612	3,018,809
Production '000 gal.	254,094	445,536	207,465	93,944	46,038	32,080	483	1,079,640
Av. per Cow .. gal.	296	528	218	598	347	430	300	358
1947-48—								
Dairy Cows(a) .. No.	855,874	887,045	929,915	165,473	132,008	77,127	1,761	3,049,203
Production '000 gal.	295,370	428,569	272,791	92,498	50,363	32,936	578	1,173,105
Av. per cow .. gal.	345	483	293	559	382	427	328	385
1948-49—								
Dairy Cows(a) .. No.	867,236	913,569	954,824	169,909	132,762	81,784	1,854	3,121,938
Production '000 gal.	291,915	462,446	277,152	91,319	50,612	38,541	659	1,212,644
Av. per cow .. gal.	337	506	290	537	381	471	355	388

(a) Mean for the year.

(b) Excludes Northern Territory.

8. Butter Production.—There was a steady increase in the annual output of butter for many years prior to the 1939-45 War. The average annual production rose from 126,000 tons for the five years ended 1928-29 to 195,000 tons for the five years ended 1938-39.

Following the record output of 212,000 tons in 1939-40, there was a steady decline in butter production until 1946-47, when 143,300 tons were produced. The factors contributing to this decline include unfavourable seasons, transfer of man-power owing to the war, shortages of fertilizers for pastures and change in some factories from butter production to the manufacture of cheese and preserved whole milk products. Output increased to 162,100 tons in 1947-48 and to about 165,800 tons in 1948-49. The foregoing figures include butter produced on farms which has shown a steady decline from about 8,700 tons in 1938-39 to 4,500 tons in 1947-48.

The following table shows production of butter in factories in each State for the years 1944-45 to 1948-49, compared with the average for the five years ended 1938-39.

BUTTER PRODUCTION IN FACTORIES.

(Tons.)

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia (a)
Average, 1934-35 to 1938-39 ..	52,949	62,489	53,255	7,570	5,459	3,811	185,533
1944-45 ..	32,019	46,443	42,415	6,977	5,676	3,643	137,173
1945-46 ..	33,161	50,080	45,198	7,750	5,604	3,778	145,571
1946-47 ..	26,958	59,387	33,078	9,242	6,000	4,191	138,856
1947-48 ..	33,958	56,717	46,454	9,043	7,061	4,441	157,674
1948-49 ..	33,267	60,039	47,197	8,800	6,966	4,821	161,090

(a) Northern Territory and Australian Capital Territory : Nil.

The table below shows the monthly production of factory butter in Australia in each of the years 1938-39 and 1944-45 to 1948-49. The annual output of farm butter is also shown.

PRODUCTION OF BUTTER IN FACTORIES AND ON FARMS : AUSTRALIA.
(Tons.)

Particulars.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Factories—						
July	9,415	6,124	6,709	7,084	7,834	7,892
August	11,645	8,586	8,643	8,790	8,906	10,411
September	15,531	12,538	10,908	11,105	12,820	13,335
October	20,485	16,831	15,909	14,415	17,292	17,487
November	22,561	15,955	16,051	14,904	17,442	18,166
December	20,710	15,193	16,503	15,178	20,612	18,481
January	15,872	15,409	14,338	13,303	19,345	17,101
February	15,816	12,129	14,175	12,699	13,806	14,246
March	17,729	12,922	14,691	13,384	13,493	15,380
April	16,583	8,707	11,738	10,782	10,104	12,153
May	15,568	6,784	9,248	9,209	8,636	9,139
June	12,871	5,995	6,658	8,003	7,384	7,299
Factory Total (a) ..	194,786	137,173	145,571	138,856	157,674	161,090
Made on Farms (b) ..	8,714	4,790	4,792	4,497	4,467	4,740
Grand Total ..	203,500	141,963	150,363	143,353	162,141	165,830

(a) Year ended June.

(b) Year ended March.

9. **Cheese Production.**—For many years the production of cheese in Australia ranged about 13,400 tons per annum. By 1932-33 production had risen to 16,500 tons and, apart from minor fluctuations, has continued to rise until 1948-49, when the record output of approximately 43,200 tons was recorded. The States contributing chiefly towards this increase are Victoria, Queensland and South Australia.

The following table shows production of cheese in factories in each State in the years 1944-45 to 1948-49 in comparison with average output during the years 1934-35 to 1938-39 :—

CHEESE PRODUCTION IN FACTORIES.

(Tons.)

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.(a)
Average, 1934-35 to 1938-39 ..	3,332	6,177	5,071	5,437	390	1,210	21,617
1944-45	1,964	12,205	10,101	8,244	822	1,122	34,458
1945-46	2,169	14,913	12,023	10,035	811	1,013	40,964
1946-47	2,029	17,615	7,720	12,768	1,016	1,070	42,218
1947-48	2,637	16,167	9,641	11,530	1,019	447	41,441
1948-49	2,490	18,352	9,390	11,654	870	404	43,160

(a) Northern Territory and Australian Capital Territory : Nil.

The monthly production of cheese in factories in Australia, together with the annual output from farms, is shown in the table below for 1938-39 and each of the years 1944-45 to 1948-49.

PRODUCTION OF CHEESE IN FACTORIES AND ON FARMS : AUSTRALIA.

(Tons.)

Month.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Factories—						
July	1,517	1,572	1,643	2,177	2,393	2,051
August	1,950	2,555	2,524	3,038	3,047	3,143
September	2,820	3,918	3,865	4,173	4,259	4,572
October	4,028	5,273	5,196	5,447	5,703	5,978
November	3,990	4,858	5,147	5,604	5,760	5,802
December	3,462	4,112	4,832	5,017	5,343	5,317
January	2,212	3,264	3,512	3,737	4,463	4,257
February	1,715	2,433	3,224	2,781	2,864	2,997
March	1,826	2,471	3,526	2,793	2,428	3,165
April	1,656	1,496	2,894	2,489	1,698	2,446
May	1,898	1,279	2,570	2,608	1,795	1,854
June	1,900	1,227	2,031	2,354	1,688	1,578
Factory Total (a) ..	28,974	34,458	40,964	42,218	41,441	43,160
Made on Farms (b) ..	330	162	274	132	37	42
Grand Total	29,304	34,620	41,238	42,350	41,478	43,202

(a) Year ended June.

(b) Year ended March.

10. **Condensed, Concentrated and Powdered, etc. Milk Production.**—The manufacture of these products has expanded greatly since 1938-39—to meet the needs of the Services during the 1939-45 War and for export purposes since the war. The output of condensed milk (sweetened and unsweetened) in 1948-49 was 166.5 per cent. higher than in the three years ended 1938-39 while that of powdered milk (full cream and skim) was 167.2 per cent. higher. Over the same period the quantity of whole milk used in the manufacture of the products shown below increased from 28.1 million gallons to 86.2 million gallons or by 206.8 per cent. These products are manufactured mainly in Victoria, which produced 64.8 per cent. of the total in 1948-49. New South Wales accounted for 20.8 per cent. of the total in that year, the remaining States producing 14.4 per cent.

The following table shows details of the output of condensed, concentrated, powdered, etc. milk during the years 1944-45 to 1948-49, compared with the available details for the years 1936-37 to 1938-39.

PRODUCTION OF CONDENSED, CONCENTRATED AND POWDERED, ETC. MILK : AUSTRALIA.

(Tons.)

Year.	Condensed Milk (Sweetened and Unsweetened).	Concentrated Whole Milk. (a)	Powdered Milk.		Infants' and Invalids' Foods (including Malted Milk and Milk Sugar).	Total.
			Full Cream and Skim.	Butter and Whey.		
Average, 1936-37 to 1938-39	17,347	(b) 1,355	9,464	(b) 701	(b) 1,131	(b) 29,998
1944-45	42,706	9,173	15,331	971	6,536	74,717
1945-46	42,997	9,138	16,645	1,636	8,851	79,267
1946-47	41,257	9,466	18,017	2,805	8,452	79,997
1947-48	45,595	13,444	20,394	3,411	9,452	92,296
1948-49(c)	46,232	13,057	25,259	4,498	9,841	98,887

(a) For ice cream manufacture.

(b) Incomplete.

(c) Subject to revision.

11. **Local Consumption of Butter and Cheese.**—The production of butter and cheese less net exports and adjusted to account for movements in stocks, represents the quantity available for consumption in Australia.

As previously mentioned, the quantity of butter required by the Armed Services based upon Australia limited supplies during the war years for export overseas and for consumption in Australia. The former had diminished to such an extent that, in order to prevent further decline, it became necessary to introduce a system of butter rationing on 7th June, 1943. The rate was fixed at 8 oz. per head per week, but was reduced to 6 oz. per week as from 7th June, 1944. Butter rationing was discontinued from 16th June, 1950.

As a result of rationing, butter consumption in 1948-49 was 24.3 lb. per head per annum compared with an average of 32.9 lb. during the years 1936-37 to 1938-39. The rationing of butter has been associated with increased cheese consumption which amounted to 5.1 lb. per head in 1948-49 compared with 4.4 lb. pre-war.

The following table shows details of the production and disposals of butter and cheese for the periods 1946-47 to 1948-49, compared with the average for the years 1936-37 to 1938-39.

PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE: AUSTRALIA.
(’000 tons.)

Year.	Changes in Stock.	Production.	Exports. (a)	Consumption in Australia.	
				Total	Per Head per annum.
BUTTER.					
Average, 1936-37 to 1938-39	(b)	191.0	90.0	101.0	lb. 32.9
1947	(c) -2.2	143.4	60.7	84.9	25.3
1948	(c) -6.4	162.1	83.8	84.7	24.8
1949	(c) -2.1	165.8	83.4	84.5	24.3
CHEESE.					
Average, 1936-37 to 1938-39	(b)	24.9	11.5	13.4	lb. 4.4
1947	- 2.2	42.4	24.0	20.6	6.1
1948 .. .. .	..	41.5	22.9	18.6	5.5
1949	- 0.7	43.2	26.2	17.7	5.1

(a) Figures for butter include dry butter fat, ghee and tropical spread expressed as butter as well as butter shipped as ships' stores. Figures for cheese include ships' stores after allowance for a small quantity of cheese imported. (b) Not available. (c) Includes allowance for movements in stocks other than those held in main cold stores.

12. **Marketing of Dairy Products.**—(i) *The Dairy Produce Export Control Act* 1924-47. Introduced at the request of the dairying industry this Act was passed by the Commonwealth Parliament with the object of organizing the overseas marketing of Australian dairy produce. A Dairy Produce Control Board was appointed and was in existence from 1924 to 1935. It dealt with matters relating to the organization and supervision of overseas marketing of dairy produce. In the course of its functions the Board regulated shipments to ensure regularity of supply in the London market, controlled forward selling, obtained reductions in overseas freights and insurance rates, and participated in an advertising campaign in the United Kingdom.

Prior to the appointment of the Dairy Produce Control Board a voluntary body—the Australian Dairy Council—was established to advise and make recommendations to the Governments on problems connected with the production, manufacture and quality of dairy produce, pasture improvement and diseases of dairy cattle.

Following a recommendation by the Australian Agricultural Council the functions of these bodies were combined by an amending Act of 1935 under the Australian Dairy Produce Board and provision was made for the allocation of money from the Board's funds for research and investigation into pastures, diseases of dairy cattle and the quality of butter. The functions of the Board were later extended to enable it to advise the Government in connexion with the transport of dairy produce, the securing of new markets, the expansion of existing markets and other matters.

The Australian Dairy Produce Board was re-constituted in 1947 by an amendment to the Dairy Produce Export Control Act, reducing its membership from seventeen to twelve. The functions of the Board were extended to enable it to purchase and sell, on behalf of the Commonwealth, dairy produce intended for export, and to control all matters concerning the handling, storage, protection, treatment, transfer and shipment of the produce so purchased or sold.

(ii) *The Dairy Produce Export Charges Act 1924-1937.* This Act provides for the imposition of a levy on all butter and cheese exported from Australia to cover the administrative expenses of the Board and for advertising and other purposes. The rate of the levy is fixed by regulation.

(iii) *War-time Marketing.* Reference to the marketing arrangements which operated during the 1939-45 War was made in Chapter XXVIII. "Miscellaneous", pp. 1108-1110 of Official Year Book No. 36.

13. *Butter and Cheese Contracts.*—(i) *General.* Details of the war-time contracts arranged between the United Kingdom and Australian Governments whereby the former undertook to purchase Australia's surplus butter and cheese were shown on pp. 985 and 986 of Official Year Book No. 37. The purchase of butter and cheese in 1944-45 and subsequent years has been covered by the Long-Term Purchase Agreement (*see sub-par. (ii) following*).

For the years 1943-44 to 1947-48 the United Kingdom Government reimbursed the Australian Government to the extent of subsidy paid on butter and cheese exported on Ministry of Food account. Since 1st July, 1948, however, contract prices paid by the United Kingdom Government have been in excess of the basic return to the Australian manufacturer. As a result, subsidy on butter and cheese exported was discontinued from that date and returns from export sales in excess of the basic return to the producer have been credited to the Dairy Prices Stabilization Fund (*see par. 5 (i) ante*).

The following tables indicate the prices per cwt. f.o.b. Australian currency for the various grades of butter and cheese for the several war-time contracts, together with the prices payable under the Long-Term Purchase Agreement up to the year 1949-50.

PRICES OF BUTTER, UNITED KINGDOM CONTRACTS.

(s. d.)

Prices per cwt. f.o.b. Australian currency.

Period.	Choice.	1st.	2nd.	Pastry.	Whey, 1st.	Whey, 2nd.	Whey, Pastry.
13th November, 1939 to 30th June, 1940							
1940-41	137 2½	135 7½	131 1½	127 6	127 6	122 6	117 6
1941-42	142 9½	141 3	136 9½	127 6	127 6	122 6	117 6
1942-43	142 9½	141 3	136 9½	133 1½	133 1½	128 1½	123 1½
1943-44	184 8½	183 1½	178 7½	175 0	175 0	170 0	165 0
1944-45	216 10½	215 4	210 7½	206 10½	206 10½	201 10½	196 10½
1945-46	254 4½	252 10	248 1½	244 4½	244 4½	239 4½	234 4½
1946-47	291 10½	290 3½	285 7½	281 10½	281 10½	276 10½	271 10½
1947-48	313 9	312 2½	307 6	303 9	303 9	298 9	293 9
1948-49							
1949-50							

PRICES OF CHEESE, UNITED KINGDOM CONTRACTS.

(s. d.)

Period.	Prices per cwt. f.o.b. Australian currency.		
	Choicest, 1st.	2nd.	3rd.
20th November, 1939 to 30th June, 1940			
1940-41	76 6½	74 0½	71 6½
1941-42	83 9	81 3	78 9
1942-43	87 6	85 0	82 6
1943-44			
1944-45	107 6	105 0	102 6
1945-46			
1946-47	126 3	123 9	121 3
1947-48	145 7½	143 1½	140 7½
1948-49	164 4½	161 10½	159 4½
1949-50	175 0	172 6	170 0

(ii) *Long-Term Purchase Agreement.* Early in 1945 an agreement was completed between the United Kingdom and Australian Governments covering the sale to the former of Australia's surplus butter and cheese for the four years 1944-45 to 1947-48. The agreement was later extended to cover the period up to 30th June, 1955. In the original agreement, prices were stipulated for the initial two years ended June, 1946, while any variation in price for the succeeding years was not to exceed 7½ per cent. of the price paid for the preceding year. In accordance with the terms of the agreement, prices were increased for the year 1946-47 and further increases were agreed upon for the years 1947-48 to 1949-50 following representations from the Australian Government after having considered recommendations by the Joint Dairy Industry Advisory Committee (*see par. 5 above*).

The United Kingdom undertakes responsibility for storage costs if unable to provide ships to lift butter and cheese from store after 90 days, and makes advances against stored stock in this event.

The usual provisions relative to quality, packing, etc. continue to obtain, but in regard to payment the United Kingdom pays 97½ per cent. of the value on shipment and a further 2½ per cent. 60 days after the date of the last bill of lading in respect of butter and cheese carried by the vessel.

14. *Oversea Trade in Butter, Cheese and Milk.*—The production of butter and cheese in Australia is considerably in excess of local requirements and consequently a substantial surplus is available for export overseas. In normal circumstances the extent of this surplus is chiefly dependent upon the seasonal conditions. In the immediate pre-war period the quantity of butter and cheese consumed annually in Australia was about 101,000 tons and 13,400 tons respectively, and production in excess of these amounts was available as surplus for export. In the post-war period rationing has restricted Australian consumption of butter to about 85,000 tons but production is still considerably below the pre-war level, the net result being reduction in the exportable surplus.

Because of war-time requirements due to the presence of Australian and Allied Servicemen in the South-West Pacific Area, exports of butter to the United Kingdom were reduced to a level lower than that attained in any year since 1926-27. During 1938-39, 97,000 tons, or 95 per cent. of all butter exported, was shipped to the United Kingdom, but by 1944-45 exports to this country had decreased to 37,000 tons or 86 per cent. of the total quantity exported. In 1947-48 the quantity shipped to the United Kingdom was 76,000 tons (92 per cent. of the total exports).

With cheese, and for the same reason, increased production has been accompanied by decreased exports. In 1938-39 exports totalled 16,038 tons of which 15,500 tons were exported to the United Kingdom. By 1944-45, however, the quantity exported to the United Kingdom had declined to 2,800 tons or 18 per cent. of the total of 15,000 tons exported. Since the war cheese exports have increased greatly and in 1947-48 a total quantity of 22,900 tons was exported of which 17,500 tons or nearly 77 per cent. was shipped to the United Kingdom.

All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to the supervision, inspection and examination of officers appointed for that purpose. These commodities are graded according to quality which has been fixed by regulation as follows :—Flavour and aroma, 50 points; texture, 30 points; and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality; at 90 to 92 points, first quality; at 86 to 89 points, second quality; and at 80 to 85 points, pastry or cooking quality or, in the case of cheese, third quality.

In the following table particulars are given of the relative proportions of butter and cheese graded for export according to quality. Further details, which include actual quantities by States, are to be found in *Production Bulletin* No. 42, Part II.

BULK BUTTER AND CHEESE GRADED FOR EXPORT: AUSTRALIA.

(Per cent.)

Grade.	Butter.			Cheese.		
	1945-46.	1946-47.	1947-48.	1945-46.	1946-47.	1947-48.
Choicest	44.35	48.76	53.95	0.50	1.56	0.31
First Quality	46.36	42.73	39.56	58.76	58.97	60.84
Second Quality	7.56	7.27	5.44	40.74	39.47	38.85
Third Quality(b)	1.73	1.24	1.05	(a)	(a)	(a)
Total	100.00	100.00	100.00	100.00	100.00	100.00

(a) Included with Second Quality.

(b) Includes rejected.

The following tables show the total imports, exports and net exports of butter, cheese and condensed, concentrated, etc., milk and cream.

BUTTER, CHEESE, MILK, ETC. : IMPORTS AND EXPORTS, AUSTRALIA.

Product.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
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IMPORTS.

Butter	lb. 2,743	25	4,807	167	79	109
	£ 161	3	275	10	5	24
Cheese	lb. 115,284	13,577	58,469	296,026	104,419	192,257
	£ 7,145	1,455	4,271	24,808	12,160	19,930
Milk and Cream—condensed, concentrated, etc.	lb. 65,217	238,403	893,948	213,583	108,219	186,405
	£ 1,712	8,444	32,206	7,053	4,435	7,184

EXPORTS.

Butter	lb. 215,272,581	104,226,518	93,739,086	137,611,340	133,642,282	184,773,844
	£ 10,378,823	6,870,852	8,249,506	12,271,662	12,569,922	20,629,483
Cheese	lb. 21,379,417	32,974,752	33,516,764	32,770,273	53,661,771	51,017,442
	£ 608,931	1,953,958	1,975,333	1,689,124	2,654,956	3,262,634
Milk and Cream—condensed, concentrated, etc.	lb. 19,908,891	39,251,891	46,871,107	58,620,882	103,115,838	93,285,010
	£ 808,057	1,447,979	1,780,297	2,155,972	4,234,216	4,608,322

NET EXPORTS.

Butter	lb. 215,260,838	104,226,493	93,734,279	137,611,173	133,642,203	184,773,735
	£ 10,378,662	6,870,849	8,249,231	12,271,652	12,569,917	20,629,459
Cheese	lb. 21,264,133	32,961,175	33,458,295	32,474,247	53,557,352	50,825,185
	£ 601,786	1,952,503	1,974,062	1,664,316	2,642,796	3,242,704
Milk and Cream—condensed, concentrated, etc.	lb. 19,843,674	39,013,488	45,977,159	58,407,299	103,007,619	93,098,608
	£ 806,345	1,439,535	1,748,091	2,148,919	4,229,781	4,601,135

§ 3. Pigs and Pig Products.

1. Pigs.—Between 1928–29 and 1938–39 the number of pigs fluctuated around one million. In the latter year an upward movement commenced and continued until the record number of 1,797,340 was recorded in 1940–41. There was a decline in the following two years but the numbers rose again to 1,746,721 in 1943–44. Since that year there has been a continuous decline, the number recorded at 31st March, 1949 being 1,196,321. The distribution of pigs among the States and Territories at 31st March, 1949 was—New South Wales, 375,212; Victoria, 223,823; Queensland, 407,322; South Australia, 71,427; Western Australia, 80,689; Tasmania, 36,996; Northern Territory, 384; Australian Capital Territory, 468.

A more accurate index of the development of pig-raising in Australia is provided in the following table which combines, for each of the years 1938–39 to 1948–49, the number of slaughtering with the number returned.

NUMBER OF PIGS AND NUMBER SLAUGHTERED : AUSTRALIA.

Year.	Number of Pigs.	Number Slaughtered.	Year.	Number of Pigs.	Number Slaughtered.
1938–39	1,155,591	1,839,597	1944–45(a)	1,630,855	1,966,434
1939–40	1,455,341	1,952,552	1945–46(a)	1,425,709	1,727,924
1940–41	1,797,340	2,350,358	1946–47(a)	1,273,011	1,599,220
1941–42	1,477,303	2,593,927	1947–48(a)	1,254,683	1,532,421
1942–43(a)	1,563,000	2,126,000	1948–49(a)	1,196,321	1,676,157
1943–44(a)	1,746,721	1,828,456			

(a) Year ended 31st March. The numbers slaughtered relate to slaughtering for human consumption.

(b) Subject to revision.

Further details relating to pig numbers are given in Chapter XIX. "Pastoral Production." A graph showing the distribution of pigs in Australia at 31st March, 1948 appears on p. 898 of this Year Book.

2. Size of Pig Herds.—A series of special tabulations relating to rural holdings undertaken for all States for the year 1947–48 covered, *inter alia*, a classification of holdings carrying pigs according to size of herd, details of which are shown below. Full details of the tabulations showing the following size classifications of pig holdings are published in *Production Bulletin* No. 42—Part II.—*Primary Industries and Total Recorded Production* :—(i) pig holdings classified in area series and according to size of herd; (ii) pig holdings also growing wheat for grain, similarly classified; and (iii) pig holdings also carrying dairy cattle classified according to size of the respective herds.

HOLDINGS CARRYING PIGS : CLASSIFICATION ACCORDING TO SIZE OF HERD, 31st MARCH, 1948.

Size of Herd.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust. (a)
Under 5	3,631	4,308	2,523	2,564	1,049	2,180	13	16,268
5 and under 10	2,171	2,025	2,232	1,159	691	737	..	9,015
10 " " 15	1,868	1,728	2,134	698	584	540	..	7,552
15 " " 20	1,471	1,189	1,724	480	373	286	1	5,524
20 " " 30	2,355	1,686	2,596	568	580	331	..	8,116
30 " " 50	2,145	1,604	2,608	494	512	268	..	7,571
50 " " 100	1,114	823	1,413	286	306	78	2	4,022
100 and over	393	248	280	95	118	25	1	1,160
Total	15,148	13,611	15,510	6,344	4,213	4,385	17	59,228

(a) Excludes Northern Territory.

3. **Pork.**—(i) *Production.* With Allied Servicemen in Australia during the war years, the demand for pork was considerably increased and producers were encouraged to increase production to the highest level attainable in order to meet Service requirements and maintain exports as far as possible. After these requirements had been met, the quantity available for civilian consumption was much less than that normally consumed. In some States the civilian consumption of pork was negligible, but in other parts of Australia, where transport difficulties precluded the marketing of pork in the main centres, civilian consumption was not prohibited. In the following table details of production in each State are shown for the years 1944-45 to 1948-49 compared with average production during the years 1934-35 to 1938-39.

PRODUCTION OF PORK (BONE-IN WEIGHT).

(Tons.)

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Total.
Average, 1934-35 to 1938-39 ..	9,938	12,236	9,867	3,215	1,741	1,240	7	38	38,282
1944-45 ..	8,605	11,407	8,249	9,013	4,006	1,270	17	3	42,570
1945-46 ..	6,335	9,595	9,363	4,072	4,749	986	17	3	35,120
1946-47 ..	6,364	7,153	9,011	2,978	3,446	1,039	17	18	30,026
1947-48 ..	6,448	7,138	7,134	2,954	2,234	1,391	28	34	27,361
1948-49 ..	9,831	8,644	12,254	2,358	2,649	1,442	27	56	37,261

(ii) *Consumption.* For the three pre-war years ended 1938-39 the average annual production of pork was 46,000 tons, of which 14,000 tons were exported, leaving 32,000 tons, or the carcass equivalent of 10.4 lb. per head per annum, available for local consumption.

As in the case of other meats, the demand for pork for the Armed Services and for exports was so great that it was necessary to divert supplies from civilian consumption under the rationing scheme introduced in January, 1944. This resulted in the consumption of pork per head declining from the pre-war average of 10.4 lb. to 9.0 lb. in 1943, to 6.4 lb. in 1944 and to 4.9 lb. in 1945. After 1945 there was a reduction in exports and supplies to the Armed Services and in September, 1946, pork was made available to civilians in all States subject to coupon rationing. As a result, consumption per head rose to 5.9 lb. in 1946, 6.8 lb. in 1946-47 and 7.1 lb. in 1947-48. Preliminary details indicate a further rise in consumption to 7.4 lb. per head in 1948-49. In the following table details of the production and disposal of pork are shown for the periods 1937-39 and 1946-47 to 1948-49.

PRODUCTION AND DISPOSAL OF PORK (BONE-IN WEIGHT) : AUSTRALIA.

('000 tons.)

Year.	Changes in Stock.	Production (a)	Exports.	Canning.	Consumption in Australia.	
					Total.	Per head per annum.
Average, 1936-37 to 1938-39 ..	..	46	14	..	32	10.4
1946-47 ..	4	30	8	3	23	6.8
1947-48 ..	..	27	2	1	24	7.1
1948-49 ..	..	37	9	2	26	7.4

(a) Includes an estimate of trimmings from baconer carcasses.

4. **Bacon and Ham.**—(i) *Production.* As in the case of pork, the increased demand for bacon and ham during the war years stimulated production to a level not previously attained. Production reached its peak in 1944-45 when 56,246 tons of bacon and ham were cured. This has been followed by a continuous decline in output in each succeeding year to 41,584 tons in 1948-49. Details of production are shown by States in the following table for the five pre-war years ended 1938-39 and each year 1944-45 to 1948-49.

PRODUCTION OF BACON AND HAM.

(Tons.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Average, 1934-35 to 1938-39	9,963	7,614	9,269	2,950	2,013	970	I	32,780
1944-45	20,148	12,103	13,299	4,499	5,007	1,190	..	56,246
1945-46	17,409	9,377	10,699	5,239	4,608	1,255	..	48,587
1946-47	15,830	10,998	9,983	5,069	4,638	1,150	..	47,668
1947-48	14,175	11,159	10,142	4,884	4,232	1,317	..	45,909
1948-49	13,302	10,204	9,412	3,788	3,756	1,122	..	41,584

(ii) *Consumption.* For the three pre-war years ended 1938-39 the annual production of bacon and ham averaged 32,500 tons of which 1,000 tons were exported, leaving 31,500 tons, or 10.3 lb. per head per annum, available for local consumption. The presence of large numbers of Allied Servicemen in Australia during the 1939-45 War necessitated the diversion of civilian supplies. Bacon and ham were not included in the list of rationed meat but supplies to be placed on the civilian market were determined after the demands of the Services and export requirements had been met. Consumption per head declined in the early stages of the war but by 1944 it had been restored to the pre-war level and subsequently increased to 12.7 lb. in 1946-47. This was followed by a fall in consumption to 12.0 lb. in 1947-48 and 10.4 lb. in 1948-49. Details of production and disposal of bacon and ham for the periods 1937-39 and 1946-47 to 1948-49 are shown in the following table.

PRODUCTION AND DISPOSAL OF BACON AND HAM : AUSTRALIA.

(*000 tons—cured weight.)

Year.	Changes in Stock.	Production.	Exports.	Canning.	Consumption in Australia.	
					Total	Per head per annum.
Average, 1936-37 to 1938-39	..	32.5	1.0	..	31.5	10.3 lb.
1946-47 .. ..	.. (a)	47.7	3.3	2.1	42.5	12.7
1947-48 .. ..	.. -0.2	45.9	2.7	2.1	41.0	12.0
1948-49 .. ..	.. +0.1	41.6	3.4	2.2	36.1	10.4
	.. -0.1					

(a) Not available.

5. **United Kingdom Contracts.**—Details relating to the several war-time contracts and the more recent Long-Term Purchase Agreement between the Governments of the Commonwealth and the United Kingdom for the sale and purchase of Australia's surplus production of meats (including pigmeats) are included in Chapter XIX. "Pastoral Production".

6. **Oversea Trade in Pigs and Pig Products.**—The total oversea trade in pigs and pig products for the years 1943-44 to 1947-48 compared with the average for the five years 1934-35 to 1938-39 is shown in the following table :—

PIGS AND PIG PRODUCTS : OVERSEA TRADE, AUSTRALIA.

Particulars.		Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
PIGS.							
Imports ..	No.	29	11	33	17	42	32
	£	1,099	629	1,306	785	3,213	2,362
Exports ..	No.	151	50	380	55	623	941
	£	774	497	1,802	555	3,975	7,743
Net Exports	No.	122	39	347	38	581	909
	£	-325	-132	588	-230	762	5,381

BACON AND HAM.(a)

Imports ..	lb.	7,307	13	48	106	63	42
	£	399	1	8	16	13	4
Exports ..	lb.	1,686,323	14,954,984	11,045,954	18,856,610	14,674,450	8,587,844
	£	111,783	1,172,784	905,545	1,700,266	1,404,610	865,201
Net Exports	lb.	1,679,016	14,954,971	11,045,906	18,856,504	14,674,387	8,587,802
	£	111,384	1,172,783	905,537	1,700,250	1,404,597	865,197

LARD.(b)

Imports ..	lb.	40,759	9,733	60	..	10	58
	£	983	649	..	..	..	8
Exports ..	lb.	3,742,205	2,752,038	5,433,516	680,922	184,412	136,230
	£	58,546	61,671	164,147	24,870	7,751	9,628
Net Exports	lb.	3,701,446	2,742,305	5,433,456	680,922	184,402	136,172
	£	57,563	61,022	164,147	24,870	7,751	9,620

FROZEN PORK.

Imports ..	lb.	55,112	..	..	..	12,315	..
	£	1,948	..	..	..	251	..
Exports ..	lb.	26,141,231	16,017,199	39,881,804	30,772,905	18,705,329	3,728,088
	£	608,490	587,321	1,436,706	1,204,846	843,935	208,717
Net Exports	lb.	26,086,119	16,017,199	39,881,804	30,772,905	18,693,014	3,728,088
	£	606,542	587,321	1,436,706	1,204,846	843,684	208,717

(a) Excludes tinned bacon for years 1934-35 to 1938-39.
1943-44 and 1944-45—includes lard oil and refined animal fats.

(b) For years 1934-35 to 1938-39,

NOTE.—The minus sign (—) signifies net imports.

§ 4. Value of Dairy Production (including Pig Farming).

1. Value of Production—Gross and Net—Years 1946-47 and 1947-48.—The values of dairy production on a gross, local and net basis are shown in the following table. Production values for this and other industries are dealt with more fully in Chapter XXVIII.—“Miscellaneous”.

GROSS, LOCAL AND NET VALUE OF DAIRY PRODUCTION, 1946-47 and 1947-48.
(£.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Farm Costs.		Net Value of Pro- duction. (a)	Depre- ciation (esti- mated).
				Fodder fed to Farm Stock.	Value of Other Materials used in process of Pro- duction.		
1946-47.							
New South Wales ..	19,196,000	1,927,000	17,269,000	2,400,000	(b) 35,000	14,834,000	(c)
Victoria ..	21,525,932	849,032	20,676,900	2,002,942	635,882	18,038,076	30,000
Queensland ..	11,960,000	310,000	11,650,000	1,370,000	270,000	10,010,000	120,000
South Australia ..	5,474,922	144,451	5,330,471	817,887	270,381	4,242,203	15,027
Western Australia ..	3,307,719	101,356	3,206,363	912,665	371,569	1,922,129	21,477
Tasmania ..	1,576,560	51,390	1,525,170	674,430	(b) 38,850	811,890	9,460
Total ..	63,041,133	3,383,229	59,657,904	8,177,924	1,621,682	49,858,298	(d) 195,964

1947-48.							
New South Wales ..	23,279,000	2,047,000	21,232,000	2,746,000	(b) 43,000	18,443,000	(c)
Victoria ..	23,767,860	876,464	22,891,396	2,184,942	790,344	19,916,110	40,000
Queensland ..	16,948,000	440,000	16,508,000	1,950,000	390,000	14,168,000	170,000
South Australia ..	6,262,713	160,323	6,102,390	826,519	290,650	4,985,221	15,027
Western Australia ..	3,637,399	130,084	3,507,315	1,034,907	436,009	2,036,399	22,292
Tasmania ..	1,948,190	53,190	1,895,000	833,410	(b) 70,000	991,530	11,230
Total ..	75,843,162	3,707,061	72,136,101	9,575,778	2,020,063	60,540,260	(d) 258,549

(a) No deduction has been made for depreciation and maintenance. (b) No allowances made for costs of power, power kerosene, petrol and other oils. (c) Not available. (d) Incomplete.

2. Net Value of Production, 1934-35 to 1947-48.—In the following table the net value of dairy production and the net value per head of population are shown by States for the years 1943-44 to 1947-48 in comparison with the averages for the years 1934-35 to 1938-39.

NET VALUE OF DAIRY PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE (£).(a)							
Average 1934-35 to 1938-39 ..	9,558,800	9,621,564	6,789,159	1,587,275	679,601	588,856	28,825,255
1943-44 ..	13,483,000	13,820,080	11,733,000	3,495,314	1,000,525	984,190	44,822,715
1944-45 ..	14,137,000	14,671,333	11,377,000	3,456,099	1,798,103	742,940	46,182,480
1945-46 ..	15,590,000	15,031,987	12,479,000	3,826,186	1,844,404	767,930	49,539,507
1946-47 ..	14,834,000	18,038,076	10,010,000	4,242,203	1,922,129	811,890	49,858,298
1947-48 ..	18,443,000	19,916,110	14,168,000	4,985,221	2,036,399	991,530	60,540,260

(a) No deduction has been made for depreciation and maintenance.

NET VALUE OF DAIRY PRODUCTION—*continued*.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
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NET VALUE PER HEAD OF MEAN POPULATION. (£ s. d.)

Average 1934-35 to							
1938-39 ..	3 11 3	5 3 11	6 17 11	2 13 11	1 9 10	2 10 6	4 4 7
1943-44 ..	4 15 11	6 19 5	11 2 6	5 13 6	3 7 2	2 16 0	6 3 4
1944-45 ..	4 17 5	7 6 10	10 12 11	5 10 11	3 14 2	3 0 2	6 5 8
1945-46 ..	5 6 4	7 9 2	11 10 3	6 1 3	3 15 3	3 1 4	6 13 4
1946-47 ..	5 0 1	8 16 10	9 2 6	6 12 5	3 17 4	3 3 9	6 12 7
1947-48 ..	6 2 8	9 12 6	12 14 8	7 12 10	4 0 0	3 15 9	7 18 6

§ 5. Poultry-Farming.

1. *General*.—Poultry-farming has been carried on in Australia for many years and the State Departments of Agriculture have encouraged its development by appointing experts to advise on the care and management of poultry and by conducting egg-laying competitions.

Originally the industry was conducted in conjunction with other branches of rural activity, mainly dairying, but it is now a specialized and distinct industry. It is from this source that the bulk of the commercial production is obtained. Practically all farms keep poultry for the purpose of supplying their own domestic requirements and in many cases some supplies from this source are also marketed. In addition, small numbers of fowls are kept in backyards of some private homes and this helps to maintain domestic needs particularly when eggs are in short supply.

2. *Numbers of Poultry*.—In pre-war years the numbers of the principal kinds of poultry was a normal feature of the annual census of live-stock in all States except Victoria and Tasmania. These data were collected on a restricted scale by all States in 1942-43, the details obtained being confined to farms of 1 acre or more producing eggs or poultry for sale. The collection has since been discontinued in some States. Because of their incompleteness, details of poultry numbers are not published.

3. *Recorded Production and Disposals of Eggs*.—(i) *Shell Eggs*. Available statistics of the production and disposals of eggs in Australia are restricted to those recorded by the Egg Boards of the several States.

Egg Boards, or authorities appointed to control the marketing of eggs, have operated in the States of New South Wales, Victoria and Queensland for some years, whilst in South Australia the Board commenced to operate in August, 1942. It was not until August, 1943 that Advisory Committees were established in Western Australia and Tasmania. These authorities were created under National Security Regulations. Statistics of recorded production of eggs for Australia as a whole are not available, therefore, prior to 1943-44.

In the following table details of receipts and disposals of eggs, as recorded by these authorities, are shown for Australia for the years 1943-44 to 1948-49.

**SHELL EGGS : RECEIVALS AND DISPOSALS RECORDED BY EGG BOARDS,
AUSTRALIA.**
(’000 dozen.)

Particulars.	Year ended June—					
	1944.	1945.	1946.	1947.	1948.	1949.
RECEIVALS.						
Stock held at beginning of year	178	7	14	1	4	494
Receipts from Consignors ..	64,165	80,899	90,599	95,751	92,381	94,308
Receipts from Producer Agents	25,000	23,124	22,454	26,767	27,046	25,901
Withdrawals from Cold Storage(a)	132	859	1,648	1,343	2,586	3,816
Interstate Transfers ..	1,848	166	858	386	181	397
Other Sources	1	..	110	2	178	..
Total	91,324	105,055	115,683	124,250	122,376	124,916
DISPOSALS.						
Sales by Egg Boards ..	39,767	45,618	45,597	40,296	36,781	35,001
Sales by Producer Agents ..	25,000	23,124	22,454	26,767	27,046	25,901
Packed for Cold Storage(a) ..	127	807	1,590	1,343	2,588	4,022
Packed for Powder ..	10,557	17,902	11,055	7,996	3,272	1,725
Packed for Pulp ..	13,431	16,491	26,089	30,150	36,207	36,243
Packed for Export .. ..	..	107	7,225	16,421	14,827	20,171
Interstate Transfers ..	1,848	166	858	386	181	397
Other Disposals	587	826	814	887	980	902
Stock held at end of year ..	7	14	1	4	494	554
Total	91,324	105,055	115,683	124,250	122,376	124,916

(a) Temporary and winter storage.

There has been a pronounced upward movement in the recorded production (i.e., receipts by Egg Boards, including producer agency sales) of eggs over the period covered by the previous table from 89,165,000 dozen in 1943-44 to a peak of 122,518,000 dozen in 1946-47. Receipts totalled 119,427,000 dozen in 1947-48 and 120,209,000 dozen in 1948-49. The movement in production in the respective States is shown in the following table.

SHELL EGGS : PRODUCTION(a) RECORDED BY EGG BOARDS.
(’000 dozen.)

State.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	41,888	47,158	49,807	54,100	50,569	52,052
Victoria ..	23,228	27,953	30,933	37,110	36,220	32,842
Queensland ..	7,212	9,501	11,790	9,422	9,693	12,144
South Australia ..	9,802	11,138	12,390	14,252	14,440	14,115
Western Australia ..	6,075	6,752	6,968	6,736	7,053	7,939
Tasmania ..	960	1,221	1,165	898	852	1,117
Total	89,165	104,023	113,053	122,518	119,427	120,209

(a) Receipts from consignors and producer agents.

(ii) *Egg Pulp.* Prior to the 1939-45 War, production of egg pulp was about 7 million lb. per annum. This was used almost entirely for the manufacture of cakes, pastry and biscuits, only negligible quantities being exported. Production was expanded greatly during the war years to meet the requirements of the Armed Services and has since been maintained at a high level for export purposes and to meet increased local requirements.

Particulars of the production of whole egg pulp as recorded by the Egg Boards in the several States are shown in the following table.

LIQUID WHOLE EGG : PRODUCTION RECORDED BY EGG BOARDS.
(⁰⁰⁰ lb.)

State.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	5,814	8,762	11,930	14,576	14,600	15,966
Victoria ..	5,031	7,626	8,296	12,854	16,139	14,579
Queensland ..	1,174	1,419	2,526	1,650	3,240	4,560
South Australia ..	4,495	4,605	7,122	7,073	8,510	7,663
Western Australia ..	902	883	1,122	1,295	1,834	1,782
Tasmania ..	..	500	519	247	361	129
Total	17,416	23,795	31,515	37,695	44,684	44,679

In addition to liquid whole egg, production was also recorded of liquid egg whites and liquid egg yolks. Output in 1948-49 amounted to 484,396 lb. and 321,634 lb. respectively compared with 472,131 lb. and 291,952 lb. respectively in the previous year.

(iii) *Egg Powder.* The production of dried egg powder was not established in Australia until 1942, when the industry was introduced to treat Australia's surplus eggs so as to maintain exports to the United Kingdom. The shortage of refrigerated shipping space precluded the export of shell eggs so they were converted into powdered form. Following the outbreak of war in the Pacific in December, 1941, when Australia undertook responsibility for the feeding of the fighting services in the South-West Pacific Area, the bulk of the egg powder produced was diverted, however, for use by Australian and Allied Servicemen. Since the termination of hostilities in 1945, the manufacture of egg powder has been continued for export purposes but has been considerably curtailed since 1946-47 and is now confined to one State. A market for this product in Australia has not yet been established due no doubt to the availability of fresh eggs.

Details of production of egg powder are shown in the table below.

PRODUCTION OF EGG POWDER.(a)
(⁰⁰⁰ lb.)

State.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
New South Wales ..	1,407	1,919	1,662	1,945	371	..
Victoria ..	1,044	1,361	941	1,782	400	..
Queensland ..	..	..	..	..	..	..
South Australia ..	664	1,093	568	591	812	864
Western Australia ..	356	406	392	..	..	..
Tasmania ..	..	..	..	..	..	..
Australia	3,471	4,779	3,563	4,318	1,583	864

(a) Dried whole egg and sugared egg powder.

The product now consists almost entirely of sugared egg powder. The details shown above exclude dry albumen and dried egg yolk, which amounted to 42,987 lb. and 39,756 lb. respectively in 1948-49.

4. **Consumption of Eggs.**—Statistics of egg production must necessarily be accepted with some reserve. Owing to the difficulties experienced in obtaining a complete census of output, it is more expedient to compute a figure based on the best data available. The production shown in the following table, which shows also details of exports and consumption, is based upon the records of Egg Boards of production from areas under their control plus an estimate of production from uncontrolled areas and an estimate of the production of "back yard" poultry-keepers. The estimates of total production obtained have been checked with data from other sources and found to be reasonably in accord.

ESTIMATED PRODUCTION AND DISPOSAL OF EGGS: AUSTRALIA.
(^{'000 tons.})(a)

Year.	Changes in Stock.	Estimated Total Production.	Exports (Eggs in Shell).	For Drying and Pulping.(b)	Consumption in Australia as human food.	
					Total.	Per head per annum.
Average, 1936-37 to 1938-39	(c)	89.5	7.6	3.2	78.7	lb. 25.7
1946-47	— 0.4	121.7	10.5	22.3	89.3	26.6
1947-48	+ 0.4	118.8	8.8	23.7	85.9	25.2
1948-49	+ 0.1	119.4	11.9	22.8	84.6	24.3

(a) The average weight of an egg in Australia is taken as 1.75 oz.
(c) Not available.

(b) Includes wastage.

Details of the consumption of shell eggs, liquid whole egg and total shell egg equivalent (expressed in lb. and in number of eggs) per head of civilian population per annum are shown in the following table:—

SUPPLIES OF EGGS AND EGG PRODUCTS MOVING INTO CIVILIAN CONSUMPTION : AUSTRALIA.
(lb. per head per annum.)

Commodity.	Average, 1936-37 to 1938-39.	1946-47.	1947-48.	1948-49.
Shell Eggs	25.7	26.6	25.2	24.3
Egg Powder(a) .. ..	..	..	..	..
Liquid Whole Egg(a)	0.9	2.6	2.2	2.8
Total Shell Equivalent—				
lb. per Head	26.6	29.2	27.4	27.1
No. per Head(b)	243	267	251	248

(a) In terms of weight of shell eggs.
1.75 oz.

(b) The average weight of an egg in Australia is taken as

5. **Marketing of Eggs.**—(i) *United Kingdom Contracts.* Commencing in 1939-40. annual contracts have been entered into between the United Kingdom and Australian Governments for the sale and purchase at agreed prices of Australia's surplus shell eggs, egg pulp and egg powder. During the war years lack of shipping facilities curtailed the export of shell eggs, while the demands of the Armed Forces based on Australia considerably reduced the quantity of egg powder available for shipment to the United Kingdom.

The contract for the 1947-48 season provided for the sale and purchase of Australia's surplus eggs and egg products at prices considerably in advance of those operating in previous years. The contract specified maximum quantities of 30 million dozen shell eggs, 13,500 tons of whole egg pulp, 2,700 tons of sugared egg powder and 450 tons of whole egg powder. The price for shell eggs was proportionately higher than for egg products in order to give effect to the United Kingdom's desire to obtain maximum shipments in the form of shell eggs.

Early in 1948 an agreement was entered into between the Governments of the Commonwealth and the United Kingdom covering the sale and purchase of eggs, egg pulp and egg powder for the five seasons 1948-49 to 1952-53. The agreement envisages progressive expansion in the export of eggs from Australia with ultimate objective target

of the equivalent of 105 million dozen eggs in all forms, representing further increases on those operating for 1947-48. Prices were determined for the initial three seasons of the agreement, i.e. 1948-49, 1949-50 and 1950-51, but following representations by the Australian Government in 1949 the United Kingdom Government agreed to vary the price provisions for the 1949-50 and later seasons. Revised prices for the 1949-50 season were agreed upon and prices for later seasons will be negotiated not later than 1st January in the preceeding season. Any variation in price is not to exceed $7\frac{1}{2}$ per cent. of the prices paid in the previous season. The agreement stipulates the practices to be followed in packing shell eggs to ensure the minimum of deterioration and specifies the following order of preference in the supply of eggs and egg products to the United Kingdom, viz. :— (i) eggs in shell (to be shipped between 1st June and 24th December of each season); (ii) frozen whole egg pulp; (iii) dried sugared egg; (iv) dried whole egg. Eggs suitable for export during the period June to December are not to be processed into pulp or powder. Payment of $97\frac{1}{2}$ per cent. of the contract price will be made at the time of shipment and the balance within 28 days of arrival in the United Kingdom.

The prices stipulated in the several contracts for eggs and egg products for the years 1945-46 to 1949-50 are shown in the following table. Contract prices in operation for the years 1939-40 to 1944-45 were shown on page 997 of Official Year Book No. 37.

EGGS AND EGG PRODUCTS: PRICES UNDER UNITED KINGDOM-AUSTRALIA CONTRACTS.

Australian Currency, f.o.b. Australian Ports.

Year.				Eggs in Shell.(a)	Frozen Whole Egg Pulp.	Whole Egg Powder.	Sugared Egg Powder.
				Per doz.	Per lb.	Per lb.	Per lb.
				s. d.	s. d.	s. d.	s. d.
1945-46	..	..	..	1 8	..	..	..
1946-47	..	..	..	1 8	1 5	6 6	..
1947-48	..	..	..	2 1	1 6 $\frac{1}{2}$	6 6 $\frac{1}{2}$	4 11 $\frac{1}{2}$
1948-49	..	..	..	2 4	1 8 $\frac{1}{2}$	7 0	5 1
1949-50	..	..	..	2 7	1 11.05	7 5.875	5 2.625

(a) Price for pack of 15 lb. per long hundred (ten dozens): proportionate adjustments made for other packs.

(ii) *War-time Marketing.* Details of the war-time control of egg marketing under Commonwealth legislation were given on page 998 of Official Year Book No. 37.

(iii) *Egg Export Control Act 1947.* Following the termination of Commonwealth control over the production and marketing of eggs on 31st December, 1947, functions relating to the local marketing of eggs reverted to State Egg Boards which became responsible for stabilizing prices and marketing of eggs produced in the respective States. In order to assist in marketing Australia's surplus production of eggs under the Long-Term Purchase Agreement with the United Kingdom, the Commonwealth established the Australian Egg Board under the Egg Export Control Act 1947. The Board, which commenced to operate on 1st January, 1948, is empowered to buy and sell, on behalf of the Commonwealth Government, eggs and egg products intended for export which comply with the provisions of the Export (Dairy Produce) Regulations. In addition, the Board is authorized to deal with all matters relating to the export of eggs and egg products from Australia, to make such experiments as are likely to lead to the improvement of the quality of Australian eggs and to promote their sale overseas. The Board consists of ten members, including six representatives of egg producers and one representative of the Commonwealth Government.

6. *Overseas Trade in Poultry Products.*—The Australian overseas export of poultry products has in the past been confined chiefly to eggs in shell and egg contents, which are consigned mainly to the United Kingdom. New South Wales, Victoria and South Australia are at present the largest exporters. Exports of eggs from Australia rose from less than 3 million dozen valued at £210,000 in 1928-29 to 21.7 million dozen valued at more than £1.1 million in 1934-35, but declined to 10.3 million dozen in 1939-40. A

high level of exports in 1940-41 was followed by a steep decline in 1941-42 and a further decrease in 1942-43 and 1943-44 to almost negligible quantities. Following a slight increase in 1944-45, exports rose to 7.3 million dozen in 1945-46 and to 17.5 million dozen in 1946-47. In 1947-48 exports of shell eggs fell to 14.5 million dozen valued at £1,575,073.

Prior to the 1939-45 War, exports of egg contents were small and in 1939-40 there was an excess of imports. During the war years, exports expanded greatly, mainly to meet Service requirements, and since the close of the war there has been further expansion. In 1947-48, 30.6 million lb. of egg contents, valued at £2,600,378, were exported.

Since the close of the war there has also been a remarkable increase in the exports of frozen poultry, which rose from 283,107 pair in 1945-46 to 957,724 pair in 1946-47 and to 1,870,623 pair, valued at £1,709,066 in 1947-48. The average for the pre-war years 1934-35 to 1938-39 was only 37,913 pair, valued at £29,744.

The oversea trade during the five years ended 1947-48 in comparison with the average for the five years ended 1938-39 was as follows :—

POULTRY PRODUCTS: OVERSEA TRADE, AUSTRALIA.

Particulars.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
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LIVE POULTRY.

Imports ..	No.	628	4	..	26	52	15
	£	396	25	..	171	454	16
Exports ..	No.	1,464	8,900	7,352	16,562	115,798	73,942
	£	663	7,970	6,766	10,745	7,308	7,054
Net Exports	No.	836	8,896	7,352	16,536	115,746	73,927
	£	267	7,945	6,766	10,574	6,854	7,038

FROZEN POULTRY.

Imports ..	pair	5,564	(a) 47	..	3	..	..
	£	222	4	..	3	..	..
Exports ..	pair	37,913	44,825	44,663	283,107	957,724	1,870,623
	£	29,744	36,077	43,774	208,635	872,257	1,709,066
Net Exports	pair	32,349	(b)	44,003	283,104	957,724	1,870,623
	£	29,522	36,073	43,774	208,632	872,257	1,709,066

EGGS IN SHELL.

Imports ..	doz.	27,131	8	25	100	202	883
	£	1,567	27	7	189	139	356
Exports ..	doz.	13,397,805	361,885	520,910	7,291,224	17,493,879	14,518,033
	£	867,719	32,552	51,551	638,014	1,416,549	1,575,073
Net Exports	doz.	13,370,674	361,877	520,885	7,291,124	17,493,677	14,517,150
	£	866,152	32,525	51,544	637,825	1,416,410	1,574,717

EGG CONTENTS.

Imports ..	lb.	33,098	..	4	600	456	505
	£	3,044	..	1	157	317	319
Exports ..	lb.	..	3,894,242	2,833,677	17,689,631	29,803,117	30,618,675
	£	14,079	343,941	391,410	1,452,066	3,097,208	2,600,378
Net Exports	lb.	33,098	3,894,242	2,833,673	17,689,031	29,802,661	30,618,170
	£	11,035	343,941	391,409	1,451,909	3,096,892	2,600,059

(a) Unit: lb.

(b) Quantity not available.

7. Value of Poultry Products—Gross and Net.—(i) *General.* Difficulty is experienced in obtaining complete figures for the production of poultry products. The following table sets out the values accruing to the poultry industry in Australia on a gross, local and net basis, and has been compiled from data actually collected or carefully estimated by the State Statisticians :—

GROSS, LOCAL AND NET VALUE OF POULTRY PRODUCTS, 1946-47 AND 1947-48.
(£.)

State.	Gross Production valued at Principal Markets.	Marketing Costs.	Gross Production valued at Farm.	Feed and Other Costs.	Net Value of Production. (a)
1946-47.					
New South Wales ..	10,499,000	992,000	9,507,000	3,434,000	6,073,000
Victoria ..	7,323,169	549,237	6,773,932	1,915,572	5,358,360
Queensland ..	1,546,000	214,000	1,332,000	520,000	812,000
South Australia ..	2,425,365	243,626	2,181,739	703,886	1,477,853
Western Australia ..	1,086,046	224,639	861,407	408,000	453,407
Tasmania ..	606,740	45,500	561,240	30,080	531,160
Total ..	23,486,320	2,269,002	21,217,318	6,511,538	14,705,780
1947-48.					
New South Wales ..	11,687,000	1,296,000	10,391,000	3,435,000	6,956,000
Victoria ..	8,529,257	639,691	7,889,566	1,914,509	5,975,057
Queensland ..	1,558,000	222,000	1,336,000	530,000	806,000
South Australia ..	2,909,449	268,787	2,640,662	726,199	1,914,463
Western Australia ..	1,208,041	233,810	974,231	598,938	375,293
Tasmania ..	820,530	61,540	758,990	40,670	718,320
Total ..	26,712,277	2,721,828	23,990,449	7,245,316	16,745,133

(a) No deduction has been made for depreciation and maintenance.

(ii) *States, 1934-35 to 1947-48.* In the following table the net value of poultry products and the net value per head of population are shown by States for the years 1943-44 to 1947-48 compared with the average for the five years ended 1938-39 :—

NET VALUE OF POULTRY PRODUCTS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(£.)(a)							
Average, 1934-35 to 1938-39 ..	2,228,800	2,566,974	321,536	320,739	285,358	350,690	6,074,097
1943-44 ..	4,433,000	5,152,002	786,750	1,131,644	697,049	527,050	12,727,495
1944-45 ..	5,715,000	5,592,636	931,000	1,294,909	704,070	562,660	14,800,275
1945-46 ..	5,887,000	5,666,380	1,172,000	1,250,831	583,529	569,150	15,128,800
1946-47 ..	6,073,000	5,358,360	812,000	1,477,853	453,407	531,160	14,705,780
1947-48 ..	6,956,000	5,975,057	806,000	1,914,463	375,293	718,320	16,745,133

NET VALUE PER HEAD OF MEAN POPULATION. (£ s. d.)

Average, 1934-35 to 1938-39 ..	0 16 7	1 7 9	0 6 6	0 10 11	0 12 6	1 10 1	0 17 10
1943-44 ..	1 11 6	2 12 0	0 14 11	1 16 9	1 9 2	2 3 2	1 15 0
1944-45 ..	1 19 5	2 16 0	0 17 5	2 1 7	1 9 0	2 5 7	2 0 3
1945-46 ..	2 0 2	2 16 3	1 1 7	1 19 8	1 3 10	2 5 6	2 0 9
1946-47 ..	2 1 0	2 12 6	0 14 10	2 6 2	0 18 3	2 1 9	1 19 1
1947-48 ..	2 6 3	2 17 9	0 14 6	2 18 9	0 14 9	2 14 10	2 3 10

(a) No deduction has been made for depreciation and maintenance

§ 6. Bee-Farming.

1. General.—Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming, but its place in Australia's rural economy is not very significant. The returns of honey from productive hives during 1947-48 gave an average of 83.5 lb. per hive and the average quantity of wax was 1.05 lb. per hive.

2. Production of Honey and Bees-wax.—The number of hives and the production of honey and bees-wax during the year 1947-48 are shown in the following table. As these details have been collected from holdings of one acre and upwards, any production from smaller areas is omitted and consequently the production is understated to that extent. In Victoria and South Australia, however, the compulsory registration of bee-keepers enables the collection to cover all producers and the production for these States is considered to be complete.

BEEHIVES, HONEY AND BEES-WAX, 1947-48.

State.	Beehives.			Honey Produced.		Bees-wax Produced.	
	Pro- ductive.	Unpro- ductive.	Total.	Quantity.	Gross Value.	Quantity.	Gross Value.
	No.	No.	No.	lb.	£	lb.	£
New South Wales..	102,731	38,267	140,998	9,775,673	305,490	113,211	14,151
Victoria..	82,359	26,537	108,896	6,934,219	216,694	70,851	8,856
Queensland..	26,560	13,507	40,067	1,894,915	59,216	32,147	4,018
South Australia..	73,937	19,114	93,051	5,298,161	143,492	85,405	9,875
Western Australia	19,819	6,089	25,908	1,731,902	46,906	19,598	2,450
Tasmania..	4,042	1,648	5,690	208,289	7,480	3,144	520
Aus. Cap. Ter.(a)	25	49	74	460	14	..	..
Australia..	309,473	105,211	414,684	25,843,619	779,292	324,356	39,870

(a) Estimated.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora of the eucalypts, which varies greatly from year to year. However, in recent years there has been a pronounced upward trend in the output of honey and preliminary figures for 1948-49 indicate an all-time record of 53,203,000 lb., which exceeds the previous record of 30,996,000 lb. in 1946-47 by 22,207,000 lb. or 71.6 per cent.

The table hereunder shows the production of honey and bees-wax for the five years ended 1947-48 in comparison with the averages for the years 1934-35 to 1938-39.

HONEY AND BEES-WAX PRODUCTION.

(lb.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T. (a)	Australia
HONEY.								
Average, 1934-35 to 1938-39..	3,826,477	3,600,416	689,061	3,387,563	1,125,097	181,297	4,689	12,814,600
1943-44..	2,722,302	2,544,760	1,788,005	3,000,000	707,512	121,273	3,900	15,917,952
1944-45..	2,886,000	4,210,057	1,011,491	4,652,002	951,597	122,000	3,900	19,861,620
1945-46..	3,915,519	4,061,274	1,841,355	3,182,042	1,688,685	212,828	1,650	14,006,353
1946-47..	9,016,638	9,031,407	1,614,721	8,072,753	2,170,428	188,533	1,650	30,990,180
1947-48..	9,775,673	6,934,219	1,894,915	5,298,161	1,731,902	208,289	460	25,843,619
BEES-WAX.								
Average, 1934-35 to 1938-39..	55,927	41,856	10,318	41,083	18,855	2,382	33	170,454
1943-44..	105,688	33,796	24,225	40,000	13,500	1,794	34	219,037
1944-45..	146,000	49,119	25,216	57,924	13,480	(a) 1,800	34	293,573
1945-46..	57,490	43,777	28,887	43,344	18,280	3,063	15	194,856
1946-47..	111,916	95,524	29,774	105,788	27,560	2,273	..	372,835
1947-48..	113,211	70,851	32,147	85,405	19,598	3,144	..	324,356

(a) Estimated.

3. **Value of Production—Gross and Net.**—(i) *General.* The following table shows the gross, local and net values of production which have been compiled by the Statisticians of the several States by uniform methods. These data are based upon actual records but, as previously explained, it is known that the production in some States is understated. As production costs are not known they are not taken into account, and consequently, the gross production valued at the farm and net values shown are identical:—

GROSS, LOCAL AND NET VALUE OF BEE PRODUCTS, 1946-47 AND 1947-48.

(£.)

State.		Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Farm.	Net Value of Production.(a)
1946-47.					
New South Wales .. ..	..	296,000	24,000	272,000	272,000
Victoria .. ..	..	294,172	38,427	255,745	255,745
Queensland .. ..	..	54,000	6,000	48,000	48,000
South Australia .. ..	..	247,119	29,177	217,942	217,942
Western Australia .. ..	..	72,720	..	72,720	72,720
Tasmania .. ..	..	6,150	310	5,840	5,840
Total .. ..	..	970,161	97,914	872,247	872,247
1947-48.					
New South Wales .. ..	..	320,000	27,000	293,000	293,000
Victoria .. ..	..	225,550	29,482	196,068	196,068
Queensland .. ..	..	63,000	8,000	55,000	55,000
South Australia .. ..	..	153,367	17,805	135,562	135,562
Western Australia .. ..	..	49,356	..	49,356	49,356
Tasmania .. ..	..	8,000	400	7,600	7,600
Total .. ..	..	819,273	82,687	736,586	736,586

(a) No deduction has been made for depreciation and maintenance.

(ii) *States, 1934-35 to 1947-48.* In the following table the net value of bee products and the net value per head of population are shown by States for the years 1943-44 to 1947-48 compared with the average for the five pre-war years ended 1938-39:—

NET VALUE OF BEE PRODUCTS.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(£.)(a)							
Average, 1934-35 to 1938-39	60,000	49,157	8,291	30,195	15,084	3,264	165,991
1943-44	196,000	72,864	29,250	72,000	19,281	3,140	393,441
1944-45	228,000	121,124	28,000	112,604	24,180	3,190	517,098
1945-46	119,000	115,181	49,000	77,430	46,170	6,300	413,081
1946-47	272,000	255,745	48,000	217,942	72,720	5,840	872,247
1947-48	293,000	196,068	55,000	135,562	49,356	7,600	736,586

(a) No deduction has been made for depreciation and maintenance.

NET VALUE OF BEE PRODUCTS—*continued*.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE PER HEAD OF MEAN POPULATION.(s. d.)(a)							
Average 1934-35 to							
1938-39 ..	0 5	0 6	0 2	1 1	0 8	0 3	0 6
1943-44 ..	1 5	0 9	0 7	2 4	0 9	0 3	1 1
1944-45 ..	1 7	1 2	0 7	3 7	1 0	0 3	1 5
1945-46 ..	0 9	1 1	0 11	2 6	1 11	0 6	1 1
1946-47 ..	1 10	2 6	0 10	6 10	2 11	0 6	2 4
1947-48 ..	1 11	1 11	1 0	4 2	1 11	0 7	1 11

(a) No deduction has been made for depreciation and maintenance.

4. **Oversea Trade in Bee Products.**—Prior to the 1939-45 War the production of honey exceeded Australian requirements and a small quantity was available for export. As a result of increased production, exports have risen considerably since 1938-39, when a quantity of 687,000 lb. of honey, valued at £13,957, was shipped. In 1947-48 the record quantity of 14.99 million lb., valued at £579,285, was exported.

The wider use of frame hives has reduced the production of wax, and as a result the quantity imported generally exceeds that exported, although due to the exceptionally good seasons in 1946-47 and 1947-48 production was high and exports exceeded imports by 31,545 lb. and 96,587 lb. respectively in these two years.

Particulars of the oversea trade in honey and bees-wax are shown in the following table for the five years ended 1947-48 in comparison with the average of the years 1934-35 to 1938-39.

HONEY AND BEES-WAX : OVERSEA TRADE.

Particulars.	Average, 1934-35 to 1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
HONEY.						
Imports ..	lb. 46,291	..	..	..	378	160
	£ 992	..	..	..	21	10
Exports ..	lb. 1,027,998	1,743,302	6,048,894	7,547,977	13,928,488	14,985,753
	£ 17,017	81,499	258,614	292,880	556,605	579,285
Net Exports	lb. 981,707	1,743,302	6,048,804	7,547,977	13,928,110	14,985,593
	£ 16,025	81,499	258,614	292,880	556,584	579,275
BEES-WAX.						
Imports ..	lb. 73,321	6,506	58,298	319,501	5,320	1,467
	£ 4,770	1,746	7,583	34,076	1,188	314
Exports ..	lb. 15,787	..	56	5,025	36,865	98,054
	£ 926	..	7	905	6,107	16,172
Net Exports	lb. -57,534	-6,506	-58,242	-314,476	31,545	96,587
	£ -3,844	-1,746	-7,576	-33,171	4,919	15,758

NOTE.—The minus sign (—) signifies net imports.

§ 7. Exports of Australian Farmyard, Dairy and Bee Products.

The quantities and values of Australian farmyard, dairy and bee products exported during each of the five years ended 1947-48 are shown below in comparison with those of 1938-39.

AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS : EXPORTS
OF AUSTRALIAN ORIGIN.

Particulars.	Unit of Quantity.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
QUANTITY.							
Bees-wax	lb.	5,565	..	56	5,025	36,865	98,050
Butter	"	229,542,779	104,226,518	93,739,086	137,611,340	133,642,282	184,773,844
Cheese	"	35,923,630	32,974,752	33,513,794	32,766,241	53,555,276	50,944,461
Eggs in shell	doz.	10,144,344	361,885	520,910	7,291,224	17,493,879	14,518,033
Eggs not in shell—							
Egg pulp	lb.	650,152	3,894,242	2,833,677	17,689,631	23,315,524	25,981,040
Egg powder	"						
Feathers, undressed	"	(a)	(a)	(a)	(a)	64,875,509	4,637,635
Honey	lb.	687,007	1,743,302	6,048,894	7,547,977	13,928,488	14,985,753
Lard(b)	"	5,490,959	2,752,038	5,433,516	680,922	184,412	136,230
Meats—							
Bacon and ham(c)	"	1,739,053	14,954,034	11,045,954	18,856,610	14,674,450	8,587,844
Frozen poultry	pair	21,768	44,825	44,663	283,107	957,724	1,870,623
Frozen pork	lb.	30,716,417	16,017,199	39,881,804	30,772,905	18,705,329	3,728,088
Milk—							
Condensed, Pre-served, etc.—							
Sweetened	"	12,571,636	19,736,318	20,764,161	39,880,904	74,107,428	66,638,554
Unsweetened	"	754,407	9,860,866	11,605,201	9,647,129	9,630,564	3,341,700
Dried or Powdered—							
Full Cream	"	3,000,547	7,023,583	8,789,562	5,948,091	10,307,069	14,049,352
Skim	"	575,117	208,363	121,913	1,090,434	3,564,879	5,644,184
Infants' and Invalids' Foods—							
Essentially of milk	"	1,637,311	660,006	3,046,897	2,767,764	2,843,410	3,415,782
Other .. ..	"	..	..	..	899,277	2,874,457	4,035,743
Malted	"	564,577	1,759,545	2,543,373	2,054,324	3,420,815	3,609,420
Pigs, live	No.	61	43	380	55	623	941
Poultry, live	"	2,189	8,900	7,352	16,562	115,798	73,942
VALUE (£.)							
Bees-wax		148	..	7	905	6,107	16,166
Butter		12,891,837	6,870,852	8,249,506	12,271,662	12,569,922	20,629,483
Cheese		1,073,931	1,953,958	1,975,113	1,688,700	2,643,355	3,253,273
Eggs in shell		638,159	32,552	51,551	638,014	1,416,549	1,575,073
Eggs not in shell—							
Egg pulp		23,014	343,941	391,410	1,452,066	1,637,800	1,811,520
Egg powder							
Feathers, undressed		307	4,292	5,111	1,487	8,304	9,947
Honey		13,957	81,499	258,614	292,880	556,605	579,285
Lard(b)		67,744	61,671	164,147	24,870	7,751	9,628
Meats—							
Bacon and ham(c)		119,994	1,172,784	905,545	1,700,266	1,404,610	865,201
Frozen poultry		19,917	36,077	43,774	208,635	872,257	1,709,066
Frozen pork		882,117	587,321	1,436,706	1,204,846	843,935	208,717
Milk—							
Condensed, Preserved, etc.—							
Sweetened		405,913	675,493	747,431	1,418,077	2,906,578	3,077,093
Unsweetened		19,120	281,717	355,759	289,433	305,383	126,050
Dried or Powdered—							
Full Cream		92,835	297,701	352,992	256,495	501,923	906,713
Skim		6,160	6,237	4,811	29,209	111,750	188,383
Infants' and Invalids' Foods—							
Essentially of milk		209,925	54,331	117,932	211,472	231,167	306,363
Other .. ..		..	..	..	160,924	457,500	649,706
Malted		57,058	132,219	202,272	162,758	285,162	309,807
Pigs, live		371	419	1,802	555	3,975	7,743
Poultry, live		970	7,970	6,766	10,745	7,308	7,954
Total		16,523,477	12,601,034	15,270,349	22,023,999	28,237,257	37,035,129

(a) Quantity not available.
and refined animal fats.

(b) For years 1938-39, 1943-44 and 1944-45 includes lard oil
(c) Excludes tinned bacon for year 1938-39.

§ 8. Imports of Dairy and Farmyard Products into United Kingdom.

NOTE.—Values of imports in this section are expressed in £ sterling.

1. *Summary, Principal Products.*—The following table shows the quantities and values of the principal dairy products imported into the United Kingdom during the years 1939 and 1944 to 1948.

DAIRY PRODUCTS : IMPORTS INTO UNITED KINGDOM.

Product.		1939.	1944.	1945.	1946.	1947.	1948.
Butter	cwt.	8,736,967	3,064,012	3,802,403	4,226,681	4,324,702	5,452,829
	£	48,424,422	21,189,281	31,705,834	37,347,317	42,910,992	67,843,311
Cheese	cwt.	2,845,425	5,038,357	3,824,872	4,072,955	3,825,282	3,144,937
	£	8,868,544	23,483,764	19,439,734	26,208,693	31,454,804	27,388,935
Milk, powdered and preserved	cwt.	1,698,896	3,522,467	1,907,034	2,562,662	1,436,093	1,023,491
	£	2,817,760	8,928,052	5,770,977	10,330,591	10,079,563	4,943,281
Bacon and ham ..	cwt.	7,953,486	8,144,157	4,978,400	3,638,254	2,727,727	2,760,786
	£	37,104,629	47,661,187	29,039,461	24,154,908	21,836,477	28,874,976
Pork, chilled or frozen	cwt.	988,804	7,299,742	3,850,706	1,597,505	286,853	223,351
	£	3,036,040	32,505,079	16,180,659	8,830,338	1,655,318	1,238,895
Eggs, dried ..	cwt.	9,928	1,600,093	701,563	914,665	677,058	116,436
	£	85,197	33,880,676	16,830,952	30,783,856	23,910,694	3,611,178
Eggs in shell	'000 doz.	283,315	33,537	69,072	81,330	115,613	154,523
	£	12,834,701	3,663,597	8,075,280	9,286,567	13,459,798	21,547,810

2. *Butter.*—(i) *Imports.* Australia has for many years supplied a large proportion of the butter imported into the United Kingdom. The quantity in 1948 amounted to 1,454,965 cwt., or 26.68 per cent. of the total importation. The Australian contribution was valued at £15,896,289 and was exceeded by that received from New Zealand and Denmark. Australia and New Zealand combined supplied 76.52 per cent. of the total quantity imported during 1948 and Denmark, 19.29 per cent.

In the following table particulars of the quantity and value of butter imported into the United Kingdom are shown for the years 1938 and 1948 according to country of origin.

BUTTER : IMPORTS INTO UNITED KINGDOM.

Country from which Imported.				1938.		1948.	
				Quantity.	Value.	Quantity.	Value.
				Cwt.	£	Cwt.	£
New Zealand .. ..	..	..	..	2,592,251	14,524,140	2,717,701	30,091,466
Australia .. ..	..	..	..	1,797,811	9,629,939	1,454,965	15,896,289
Canada .. ..	..	..	..	30,017	158,343	..	..
Eire .. ..	..	..	..	326,604	1,914,837	2,135	22,780
Other British Countries	..	..	..	66,083	381,545	10	112
Argentine Republic ..	..	..	..	89,876	407,678	58,751	1,377,012
Denmark .. ..	..	..	..	2,364,799	12,960,434	1,051,685	17,178,299
Netherlands .. ..	..	..	..	711,910	3,465,835	..	..
Other Foreign Countries	..	..	..	1,538,562	7,430,382	167,582	3,277,353
Total .. ..	..	..	..	9,517,913	50,873,133	5,452,829	67,843,311

(ii) *London Prices.* Fluctuations in prices in London during the years 1938–39 and 1939–40 are shown in the following table. Until September, 1939 the prices quoted represent the mean of the top prices quoted weekly for choicest salted Australian butter together with their f.o.b. equivalents in Sydney and Melbourne in terms of Australian currency. Since September, 1939, the price represents that fixed in accordance with the contract between the Governments of Australia and the United Kingdom for choicest Australian butter. Pence have been omitted throughout.

AVERAGE PRICE PER CWT. OF AUSTRALIAN CHOICEST BUTTER IN LONDON
(WITH F.O.B. EQUIVALENTS IN AUSTRALIAN CURRENCY).

Month.	1938-39.		1939-40.		Year.	London.	Aus- tralia.
	London.	Aus- tralia.(a)	London.	Aus- tralia.			
	Shillings (Stg.)	Shillings (Aust.)	Shillings (Stg.)	Shillings (Aust.)		Shillings (Stg.)	Shillings (Aust.)
July	120	135	114	(a) 127	1940-41	110	(b) 137
August	118	132	110	(a) 123	1941-42	110	137
September	116	130	120	(a) 135	1942-43	114	143
October	111	124	(c) 110	(b) 137	1943-44	114	143
November	104	115	(c) 110	(b) 137	1944-45	148	185
December	107	119	(c) 110	(b) 137	1945-46	148	185
January	120	134	(c) 110	(b) 137	1946-47	173	217
February	118	132	(c) 110	(b) 137	1947-48	203	254
March	115	128	(c) 110	(b) 137	1948-49	233	292
April	113	126	(c) 110	(b) 137	1949-50	251	314
May	107	119	(c) 110	(b) 137			
June	113	126	(c) 110	(b) 137			

(a) Sydney and Melbourne. (b) Equivalent of contract price. (c) Contract price f.o.b. Australian ports. Equivalent under pre-war conditions would be 122s. stg. covering the period 1939 to 1942, 126s. stg. during 1942 to 1944, 161s. stg. during the contract period 1944 to 1946, 185s. stg. during 1946-47, 215s. stg. during 1947-48, 245s. stg. in 1948-49 and 262s. stg. in 1949-50.

3. Cheese.—The value of cheese imported into the United Kingdom in 1948 was £27,388,935, of which £10,927,535 was received from New Zealand, £7,412,689 from the United States of America and £2,821,877 from Canada. Imports from Australia during 1948 were valued at £2,411,454.

4. Bacon and Ham.—Of a total import in 1948 of bacon and ham valued at £28,874,976, Canada supplied £18,814,574, Denmark, £5,420,420 and Netherlands, £956,854.

5. Pork.—The value of the United Kingdom imports of pork (frozen and chilled) was £1,238,895 in 1948. Imports from New Zealand, £1,038,919 and Australia, £199,210 comprised practically the whole of the imports into the United Kingdom.

6. Eggs.—In 1948 the value of eggs imported into the United Kingdom was £25,158,983, comprising eggs in shell, £21,547,810 and dried eggs, £3,611,178. The Australian share in this trade amounted to £2,131,208. Eggs in shell were supplied by Denmark, £6,474,049 and Canada, £6,333,175. The principal exporters of dried eggs to the United Kingdom were Canada, £2,874,552 and the United States of America, £445,888.

7. Milk Products.—In 1948 the value of powdered and preserved milk imported into the United Kingdom was £4,943,281, comprising condensed milk, sweetened, £2,555,751, condensed milk, unsweetened, £582,837 and powdered milk, £1,804,693. New Zealand supplied the major portion of the imports (£1,023,967), Australia, £221,583 and Eire, £202,657 being the next largest exporters.

8. Other Products.—The imports into the United Kingdom from Australia of poultry and frozen rabbits and hares amounted to £1,290,504, and £1,566,463 respectively, while those of bees-wax, game, lard and honey in 1948 were unimportant.

CHAPTER XXII.

FORESTRY.*

§ 1. General.

1. **Objects of Forestry.**—Forestry is a profession based on science, art, economic and business principles, which aims to protect and treat forests as restorable resources to provide their maximum direct and indirect benefits to a country.

The direct benefits lie in the providing of essential commodities such as structural timber, poles, piles, sleepers, pulpwood, firewood, tans, oils, resins, etc., the provision of an avenue for the healthful employment of labour in the rural forestry and sawmilling industry as well as in the transport of timber by rail, road, and water, and in numerous industries directly dependent on forest produce as a raw material. The history of all countries shows that these direct benefits are never fully appreciated until they are seriously reduced following reckless exploitation and absence of conservation measures.

The indirect benefits include regulation of stream flow from catchment areas, for a forest cover provides ideal conditions for the maximum penetration into the soil of rainfall and other precipitations which then become available for the perennial flow of streams. As a result, surface run-off after heavy rain is reduced and therefore floods are minimized in number and severity and as a corollary, the ill effects of reduced and/or intermittent flow of streams in the non-rainy season are minimized. Consequent on their action in reducing surface run off in the rainy season, forests have very marked effect in minimizing the ravages of water erosion. The presence of forests in drier wind swept areas also lessens the ill effects of æolian or wind erosion. As with the direct benefits, the indirect benefits of forests unfortunately are seldom appreciated until disastrous floods, siltation of rivers and reservoirs, washing away or blowing away of the topsoil, landslides, tearing of gullies out of hillsides and deposition of stones, rocks and other debris on fertile lands following the destruction of forests, becomes a matter of public concern.

Australia has a particular interest in water and soil conservation for several reasons. The area suitable for agricultural and pastoral development is not so large that material reduction in extent or deterioration of productive capacity cannot but limit expansion and retard development; the topographical soil and climatic conditions of many parts of Australia render them potentially highly susceptible to water and wind erosion; to ensure successful cropping of very large areas of land in Australia, millions of pounds have been spent on water conservation and irrigation schemes but in the last analysis these water conservation schemes are dependent upon regular stream flow and the minimum of siltation.

Forestry aims to protect existing forests from the ravages of fire, insect, fungus and destructive agencies generally; to improve the quality and condition of forests by carrying out judicious fellings; to control exploitation so that the forest increment and not the forest capital is removed; to regenerate cut over areas; to afforest with native or exotic species denuded lands, or those which for protection or other reasons are from a national point of view better under forest than under any other crop.

2. **General Account of Forests and Timbers.**—Compared with Australia's land area of approximately three million square miles, the area of forest land capable of producing commercial timber has always been very small, occupying in the main the wetter belts of the coastal areas and the near coastal highlands. In the early days of settlement the forests, however, appeared to the small population to be practically inexhaustible. In those early days timbers were exploited chiefly on account of their accessibility, ease of working and general utility regardless of their intrinsic merits, and so it was that what are now regarded as superlative furniture and cabinet timbers were often put to quite inferior

* A specially contributed article dealing with Forestry in Australia appeared as part of this chapter in Official Year Book No. 19 (see pp. 701-12 therein). See also "The Commercial Timbers of Australia, Their Properties and Uses" by I. H. Boas, published by the Council for Scientific and Industrial Research in 1947, "Timbers and Forest Products of Queensland" by E. H. S. Swain, published in 1928 and "Australian Standard Nomenclature of Australian Timbers" published by the Standards Association of Australia.

uses. Clearing of forest land by axe and fire stick to make room for crops and pastures has bitten deeply into the original forest estate which has been further degraded by recurrent forest fires. In retrospect, the damage and waste of the past is appalling, but it marked a phase of forest and timber loss which has been paralleled in the vigorous pioneering activity of the early history of many countries.

Predominantly the forests of Australia consist of relatively coarse bluish green foliated evergreen hardwoods. The characteristic genus is *Eucalyptus*, embracing five to six hundred species, which with few exceptions are endemic to Australia. The genus includes such species as the white mountain ash (*E. regnans*) of Victoria and Tasmania, and karri (*E. diversicolor*) of Western Australia, both of which for height and grandeur have few equals in the world. At the other end of the scale of size of species of this genus are dwarf types, including the small multiple stemmed species collectively known as the "mallees", which thrive in some of the drier belts. Probably not more than 80 to 90 of the eucalypts are used for sawmilling in Australia and, for one reason or another, not more than 30 to 40 are extensively exploited.

Among these outstanding eucalypts are—

- Blackbutt (*E. pilularis*) of New South Wales and Queensland ;
- Tallowwood (*E. microcorys*) of New South Wales and Queensland ;
- Spotted Gum (*E. maculata*) of New South Wales and Queensland ;
- Ironbarks (*E. spp.*) of New South Wales, Victoria and Queensland ;
- Alpine Ash (*E. gigantea*) of New South Wales, Victoria and Tasmania ;
- Redgum (*E. camaldulensis*) of New South Wales, Victoria and South Australia ;
- Mountain Ash (*E. regnans*) of Victoria and Tasmania ;
- Messmate, Stringybark or Tasmanian Oak (*E. Obliqua*) of New South Wales, Victoria and Tasmania ;
- Jarrah (*E. marginata*) of Western Australia ;
- Karri (*E. diversicolor*) of Western Australia.

The range and properties of eucalypt timbers are very great indeed. They fulfil all Australia's requirements where strength and durability are required, for example in such uses as railway sleepers, poles, piles, beams, girders, telegraph crossarms, waggon scantlings, posts, house blocks, wheelwright timber as well as for fuel, etc. In large measure they also meet general building requirements and, to a lesser extent perhaps, export packaging requirements. In recent years certain of the eucalypts have been extensively pulped for paper-making and, less widely, for the manufacture of hardboard.

A large number of other genera represented in the Australian forest flora also produce commercial hardwoods. Among the outstanding furniture cabinet and veneer timbers are red cedar (*Cedrela toona* Var. *Australis*), Queensland maple (*Flindersia brayleyana*), Southern and Northern silky oak (*Grevillea robusta* and *Cardwellia sublimis*, respectively), Queensland walnut (*Endiandra palmerstoni*), blackwood (*Acacia melanoxylon*), rose mahogany (*Dysoxylum fraserianum*), etc. Turpentine (*Syncarpia laurifolia*) ranks with the world's best as a harbour piling timber and swamp box (*Tristania suaveolens*) is almost as good. Coachwood (*Ceratopetalum apetalum*) came into prominence for rifle furniture and for aircraft ply during the last war. The foregoing are but a few examples indicating the range of use of the timbers of the Australian hardwood forests.

Indigenous softwood resources have never been large and are now seriously depleted. A remnant only remains of the forests of hoop pine (*Araucaria cunninghamii*), bunya pine (*Araucaria bidwillii*) of New South Wales and Queensland, kauri (*Agathis spp.*) of Queensland, and huon pine (*Dacrydium franklinii*), celerytop pine (*Phyllocladus rhomboidalis*) and King William pine (*Athrotaxis selaginoides*) of Tasmania.

There are still considerable areas of the slow-growing but useful white ant resisting cypress (*Callitris spp.*) in the forests of the inland areas of Queensland, New South Wales and Victoria, but many of them are being overcut and in some localities regeneration of the forests presents difficulties.

The savannah forests of the interior yield minor products such as sandalwood and tan barks, and the leaves of some of the mallees are used for oil distillation.

3. *Extent of Forests.*—According to data submitted by State Forestry authorities for the Empire Forestry Conference in 1947, the total area of forest is 119,402 square miles, or about 4 per cent. of the total land area of Australia. This forest area is distributed between the different States as follows :—

	Square miles.	
New South Wales and Australian Capital Territory ..	19,364	
Victoria	27,025	
Queensland	27,050	
South Australia	(a) 5,909	
Western Australia	27,154	
Tasmania	12,900	
Total	119,402	

(a) Excludes 4,600 square miles of mallee containing firewood only.

The South Australian authorities especially emphasize that, after excluding the mallee firewood areas, the percentage of the remaining forest comparable with even mediocre forest land in other States is so small as to be almost negligible. Apart from this specific case it seems clear that there is considerable variation in the standards adopted for the definition of forest land. Also it should be emphasized that the figures given are stated to be rough estimates only. Furthermore, it is generally agreed that the figures for forest areas given are often far in excess of those which are both suitable for reservation and likely to be maintained for timber production. Considering these facts the percentage of Australia carrying commercial forests is very low. On the other hand it should be noted that approximately 68 per cent. of the area of the continent is practically uninhabited and carries less than one person in every eight square miles.

The table below shows a classification of the estimated total forest area referred to above :—

CLASSIFICATION OF FOREST AREA : AUSTRALIA.

(Square miles.)

Class of Forest.				Total.	
				Area.	Percentage of Total Forest Area.
Exploitable—					
Softwood	3,858	16	1,832	5,706	4.8
Mixed wood	1,033	..	94	1,127	0.9
Hardwood	32,016	780	13,146	45,942	38.4
Total	36,907	796	15,072	52,775	44.1
Potentially Exploitable—					
Softwood	200	..	278	478	0.4
Mixed wood	100	..	..	100	0.1
Hardwood	16,853	141	7,848	24,842	20.9
Total	17,153	141	8,126	25,420	21.4
Other Land Classed as Forest					
	34,798	..	6,409	41,207	34.5
Grand Total	88,858	937	29,607	119,402	..
Percentage of Total Forest Area					
	74.3	0.8	24.9	..	100.0

The bulk of the softwood forest areas of approximately 4,000 square miles are in Queensland and New South Wales. The softwood forest areas given for these States represent natural forest, a large proportion of which consists of slow-growing native cypress (*Callitris spp.*) in low rainfall areas, and the per acre volume of which is comparatively low.

4. **Forest Reservations.**—The rate at which the original forest estate was being diminished had exercised the minds of far-sighted individuals as long ago as the eighties of last century and it was about that time that the first large forest reservations were made. Over the years recognition that forest reservations were inadequate became more general. It was not, however, until an Interstate Forestry Conference was held at Hobart in 1920 that a specific target to be aimed at was mentioned. The figure then agreed upon was an area of $24\frac{1}{2}$ million acres of indigenous forest, which it was considered should be permanently reserved to meet the future requirements of Australia.

The forest reservations in Australia at 30th June, 1948 totalled 26,403,762 acres of which 19,437,384 acres are described as Dedicated State Forests and 6,966,378 acres as Timber and Fuel Reserves. The distribution of these areas is shown by States in § 4. 2 hereafter.

In general the timber and fuel reserves are temporary only and are liable to be alienated after the timber on them has been exploited. Some of these areas contain land of high value for forestry purposes, but the greater part does not justify permanent reservation.

If the permanently reserved areas were all of good quality, accessible, and fully productive forests supplying the class of timber required, they could be regarded as adequate for a much larger population than exists in Australia at the present time. Actually, however, a considerable proportion is in inaccessible mountainous country and many of the forests contain a mixture of species, some only of which are at present of commercial value: a good proportion consists of inferior forest and a large proportion of the whole has been seriously degraded by recurrent fires. Also the indigenous forest does not contain adequate supplies of softwoods producing commercial timbers of which our needs have to be largely met by softwood timber imported from other countries.

It is freely acknowledged by Australian forestry authorities that information on forest resources is very imperfect. It is not possible at present to give a reliable estimate of the forest areas needed to meet all future demands because of the number of unknown variables involved; in particular the yield capacity per acre, future per capita consumption of different classes of timber, and the future population. It would appear, however, that all available potentially good forest country, including adequate areas for plantations of conifers, will need to be reserved, protected and systematically managed, if Australia is to approach the goal of self sufficiency in timber supplies in the future. One of the most urgent requirements in this connexion is a comprehensive, if provisional, estimate of forest resources.

5. **Plantations.**—The inadequacy of indigenous softwood supplies has been referred to. This fact has long been recognized by the various forest authorities and considerable progress has been made in experimental planting of exotic conifers and also some substantial progress made in the establishment of commercial plantations. It was natural that this aspect of forestry received earliest attention in South Australia as it is the State most poorly endowed with natural forest and it now has the largest plantation area. For some years South Australia has been exploiting considerable quantities of timber from its plantations and these quantities will increase very substantially during the next decade.

According to statements provided by State authorities, the total effective area of plantations in Australia as at the 30th June, 1948 was 265,356 acres. Details by States are given under § 4. 3.

§ 2. Forestry Activities of the Commonwealth.

1. **General.**—When the Commonwealth of Australia was established on the 1st January, 1901, forestry was not included among the matters transferred from the States to the control of the Commonwealth, and Federal jurisdiction was therefore restricted to the then relatively unimportant forests of the Australian Territories. After the 1914-18 War these Territories (including Papua-New Guinea and Norfolk Island) covered a large area, and in the aggregate contained a substantial forest resource. In the early twenties of this century a professional forester was appointed as forestry adviser to the Commonwealth Government, and he submitted preliminary reports on the forest resources of Papua-New Guinea, Norfolk Island and the Australian Capital Territory, with suggestions for future policy.

2. **Commonwealth Forestry Bureau.**—In 1925 the Commonwealth Forestry Bureau was instituted and the Commonwealth Forestry Adviser became the Inspector-General of Forests. At this stage it was considered that the most useful contribution that the Commonwealth could make to Australian forestry was: (a) to provide better facilities than then existed for the higher training in forestry for recruits to the professional ranks of the State services and for forestry research workers; and (b) to initiate research into problems connected with silviculture, forest management and forest protection, which fundamentally were common to most, if not all of the States.

By deciding to build, equip and staff the Australian Forestry School on its own Territory the Commonwealth Government ended a long standing controversy as to the site of a National School which successive Interstate Forestry Conferences had unanimously resolved was necessary. All States sent students to the Australian Forestry School when its career commenced in Adelaide in 1926, pending completion of the school in Canberra in the following year. At this time also a nucleus of selected and qualified officers was sent abroad to undergo special courses of instruction and to obtain experience for the purpose of staffing the research side of the Bureau, which received statutory powers by an Act passed in 1930. These powers and functions, subject to the regulations and the direction of the Minister, were as follows:—(a) advising the Administrations of the Territories on all matters pertaining to the management of forests; (b) the management of forests placed under its control by the Governor-General; (c) the establishment of experimental stations for the study of silviculture, forest management and forest protection; (d) the provision of educational facilities for the training of professional foresters; (e) the establishment and awarding of forestry scholarships; (f) the collection and distribution of forestry information; (g) the publication of reports and bulletins dealing with forestry; and (h) such other functions as are prescribed.

3. **Wartime Control of Timber.**—Because of its importance to the war effort of Australia, the supply of timber immediately on the outbreak of war in 1939 came under the control of the Commonwealth Department of Munitions. With the increasing importance of timber as a raw material in the production of munitions and for defence, a Controller of Timber was appointed in April, 1941 to plan and co-ordinate the supply of timber. Under an order of 8th October, 1941, the Controller of Timber was given power to prohibit the cutting of timber, to determine the priority of orders and to collect returns from persons dealing with timber.

On 23rd March, 1942, these powers were extended by the National Security (Timber Control) Regulations to cover all phases in the production, treatment and use of timber. From time to time orders were issued restricting the use of certain timbers.

4. **Forestry and Timber Bureau.**—(i) *General.* At the end of the war the war-time organization of Commonwealth Timber Control lapsed and the direction of timber supplies within the boundaries of each State became the responsibility of the respective State Governments. The Commonwealth Government decided, however, to continue certain advisory functions previously carried out by War-time Timber Control and such functions were incorporated in the Forestry and Timber Bureau Act 1946 under which the title of the Bureau was altered from Forestry Bureau to Forestry and Timber Bureau, its administration was placed under the charge of a Director-General in lieu of an Inspector-General of Forests, and the powers and functions of the Bureau were extended to embrace

the following :—(a) Collecting statistics and information regarding timber supplies and requirements in Australia, and formulating programmes in respect of the supply, production and distribution of timber in Australia, and the importation into, and exportation from, Australia of timber; (b) advising the Government of the Commonwealth or any instrumentality of that Government, or, when so requested, the Government of any State, or any instrumentality of the Government of any State, or any body or person, on matters relating to the supply, production and distribution of timber in Australia, and the importation into, and exportation from, Australia of timber; and (c) carrying out investigations and research relating to the supply, production, distribution and use of timber. The activities of the Bureau under its statutory functions are summarized below under four main headings.

(ii) *Forestry Education—Australian Forestry School.* The genesis of the Australian Forestry School situated in Canberra in the Australian Capital Territory, which was established by the Commonwealth Government primarily to meet the demand of the States for an institution which would give professional training at least equal to that given by the recognized Forestry Schools abroad, has been referred to in (2) above.

For enrolment at the School a student must possess (a) a satisfactory degree of a University; or (b) a certificate from a University that he has satisfactorily completed the two years' pre-requisite course together with a certificate from an approved Forest Authority that he has satisfactorily carried out a minimum of twelve weeks' practical forest work.

Students may enter the School (a) as nominees of a State or Commonwealth Forestry Service, (b) by the award of a scholarship issued by the Commonwealth Government, (c) as assisted students under the Commonwealth Rehabilitation Scheme for ex-service-men, or (d) as "free lance" students meeting the prescribed school fees themselves.

Ten Forestry Scholarships are made available each year by the Commonwealth Government for award to selected students. The scholarships are tenable at an Australian University for the whole or part of the pre-requisite two years' course leading to the diploma course at the Australian Forestry School and/or the diploma course at the School. The scholarships are valued at £150 per annum for the first two years while attending a University and £175 per annum during the two years at the Australian Forestry School.

A Board of Higher Forestry Education was established in 1944 under the Forestry Bureau Act 1944. Membership of the Board comprises the Director-General of the Bureau and one representative of each of the State Forest Services and Universities respectively. The powers and functions of the Board are generally to advise regarding the maintenance of the standard of the diploma course of the Australian Forestry School and matters associated therewith including the staff required for lecturing and instructional purposes, and regarding the pre-requisite University courses leading to the diploma course of the School.

Students who have passed the approved two-year preliminary science course at the Universities of Adelaide, Melbourne, Western Australia, Queensland, Sydney or Tasmania and two years of Diploma course at the School, may be granted the degree B.Sc.F. by their Universities, subject to certain conditions laid down, particulars of which may be obtained from the Registrar of the University concerned.

For various reasons the number of students attending the School each year almost since its inception has been well below the number which events have since shown were necessary to meet the demand for trained personnel. This position was naturally aggravated during the six years of war, while demands for timber and the need for expansion in all phases of forest developmental work, better protection, transport and more intensive management, have accentuated the shortage of trained staffs. The attendance at the Australian Forestry School has consequently increased substantially to nearly 50 students during 1948. It is anticipated that during the next few years the annual attendance at the School will be between 70 and 80 students. In order to meet the future requirements of professional foresters in Australia, it has been estimated that the annual attendance at the School for some years to come should be at least 40 to 50 students.

(iii) *Silvicultural Research.* Although a considerable amount of research work had been carried out by the Forest Services of the States, it was recognized that there existed a wide field of research in problems of the living tree and the forest crop which could be most usefully undertaken by the Commonwealth.

The Bureau was accordingly charged with the responsibility of initiating research into problems connected with silviculture, forest management and forest protection. However, the financial situation in the years immediately following the constitution of the Bureau delayed development in these activities, but some progress was made by the establishment of a small Central Research Station at Canberra. Experimental forest research stations were also established at Mt. Burr in the South-east of South Australia and in Tasmania on a co-operative basis with the Forest Services of those States.

The impact of the 1939-45 War further retarded progress and resulted in the temporary closure of the Tasmanian station which had been established at Launceston.

With its present limited staff, the research work of the Bureau has been concentrated largely upon studies of forest and climatic conditions, the genetical relationships and silvicultural requirements of various species, forest nutrition and the improvement of forest yields.

A considerable expansion in the research activities is envisaged over the next few years as suitable trained staff becomes available.

The activities of the Central Research Station will be expanded and in addition to the re-opening of the Experimental Forest Research Station at Launceston, it is proposed to extend the field of this class of work by the establishment of further Research Stations in other States and Papua-New Guinea, in co-operation with the respective Forest Services.

(iv) *Timber Supply.* The value of reliable statistical data covering availability of timber and timber requirements was so forcibly demonstrated during the recent war that it was considered essential to maintain at least a skeleton organization against times of future national emergency. Apart from this it became clear that for many years to come shortages of timber on the one hand and heavy post-war reconstruction demands on the other, accentuated by a rapidly increasing population, necessitated assessment of requirements and availability of supplies being kept constantly under review as a basis for short and long term policies of timber supply and distribution.

Advice is currently provided to Government Departments and the trade in matters pertaining to timber supply, including—(a) the availability of total quantities and quantities of particular grades and specifications required to meet Australia's housing and other constructional projects; (b) the quantity of timber that should be imported to assist in meeting such requirements; (c) the extent to which exports of timber and related products might be allowed without detriment to local needs in order to maintain overseas markets; and (d) distribution of timber within Australia from those States having surplus production to those with insufficient production.

A commencement has been made on investigations into timber requirements of the many industries dependent on timber, and it is hoped that this work will be further extended as suitable staff becomes available.

(v) *Research and Investigation regarding Forest Resources.* Production of timber from native grown species has considerably increased since 1939 in order to assist in meeting the heavy demands, firstly for war purposes, and more latterly for building and other constructional projects of the post-war era.

The extent to which the present rate of production can be continued is dependent upon our forest resources. In the national interests it is essential that overcutting of our forests should be avoided and in consequence it is a matter of primary importance that reliable information be available as to the country's forest resources and potentialities. To this end a national forest stocktaking is being carried out by the Bureau in co-operation with the Forest Services of the States and, to assist in the work of forest assessment, special consideration is being given to the development of the use of aerial surveys.

Consideration is also being given, in co-operation with the State Forest Services, to the establishment of increased areas of plantations of exotic pines with a view to providing additional supplies of softwood timber to meet requirements.

5. **Commercial Forests.**—The forest areas under Commonwealth control include the following :—

- (a) *Australian Capital Territory.* The forests of the Australian Capital Territory are administered by a special section of the Australian Capital Territory Administration under the Department of the Interior. Further information is contained in Chapter X.—The Territories of Australia.
- (b) *Northern Territory.* The forests of the Northern Territory are administered by the Administrator of that Territory under ordinance. The native forests of the Territory are very limited, consisting only of a limited area of rain forest in the North, patches of cypress pine, river fringing forests of paper bark, titree and savannah woodland. A Forestry Officer has recently been appointed to the Territory and efforts are to be made to protect and extend the forests.
- (c) *Norfolk Island.* The forests of Norfolk Island are administered by the Administrator of that Territory. The area reserved for forest covers 1,037 acres, of which the main species is Norfolk Island pine.
- (d) *Papua-New Guinea.* The forests are under the control of a Forestry Department and administered under ordinance of the Territorial Administration. Forestry in the Territory of Papua-New Guinea commenced with the appointment of two Forestry Officers to the Administration of New Guinea in 1938. However, the invasion of the Territory by the Japanese in 1942 resulted in the loss of all records and quantitative information regarding the forests of the Territory is largely lacking. Further information is contained in Chapter X.—The Territories of Australia.

6. **Forest Products Research.**—Fundamental investigations connected with the properties and uses of timber and forest products generally are carried out by the Forest Products Division of the Commonwealth Scientific and Industrial Research Organization. These investigations cover a very wide field, e.g., pulp, paper, seasoning, structure and chemistry of wood, tans, etc.

Details can be obtained from the annual reports and publications of the Division.

§ 3. Forest Congresses.

Reference to the various forestry conferences held in Australia and elsewhere is given in Official Year Book No. 22, page 742. The first British Empire Forestry Conference was held in London in 1920. Subsequent conferences were held in Ottawa in 1923, Australia, 1928 and South Africa, 1935, but the Fifth Conference which was to have been held in India in 1940 was postponed because of the war. The Fifth Conference was eventually held in London in 1947, at which statements were presented on a more uniform basis than formerly by the various forest authorities of the British Commonwealth of Nations. These statements included references to the part played by forestry in the different parts of the Empire in the war effort. Publications issued in connexion with these conferences are available on application to the various State and Commonwealth forestry authorities.

The first session of the Food and Agriculture Organization of the United Nations held at Quebec in 1945 drew attention to the need for statistics on forest resources and the supply of, and demand for, forest products; sound forest policies; sound forest management; afforestation; forest research; forest education; integration of forest industries and avoidance of waste; and forest products research, particularly in the direction of extending utilization to little known woods.

At the second session held at Copenhagen in 1946, the Director-General of the Forestry and Timber Bureau attended the conference as alternate delegate and adviser in forestry matters for the Commonwealth.

§ 4. State Forestry Departments.

1. **Functions.**—With the exception of Queensland, the powers and functions of State forest authorities are laid down under Forestry Acts and Regulations. In each State there is a department or commission to control forestry work. The functions of these administrations are as follows :—(a) The securing of an adequate reservation of

forest lands ; (b) the introduction of proper measures for scientific control and management of forest lands ; (c) the protection of forests ; (d) the conversion, marketing and economic utilization of forest produce ; and (e) the establishment and maintenance of coniferous forests to remedy existing deficiency in softwoods.

In Queensland, forestry is a sub-department of the Department of Public Lands.

Annual reports are issued by each State forest authority ; that for Queensland being included with the report issued by the Department of Public Lands.

In Victoria a forestry school has been established at which recruits are trained for the forestry service of the State.

2. **Forest Reservations.**—As mentioned in § 1. 4 *ante*, State forest authorities agreed that, in order to secure Australia's future requirements, an area of $24\frac{1}{2}$ million acres should be permanently reserved. In June, 1948 the area of State forests reserved in perpetuity totalled 19,437,384 acres or 79 per cent. of the area recommended as the goal to be attained.

In addition to the work of permanently reserving areas in each State, foresters are endeavouring to survey all timbered lands with a view to the elimination of those unsuitable for forestry. Considerable areas have been revoked in certain States, while dedications of new areas have resulted in gains to the permanent forest estate.

The Forestry Departments also control 6,966,378 acres recorded as temporary timber and fuel reserves, but, while these areas contain some land of high value for forestry purposes, the greater part does not justify permanent reservation.

In the following table details of forest areas as recorded by State Forest Authorities, distinguishing between Dedicated State Forests and Timber and Fuel Reserves, are given for each State as at 30th June, 1948.

AREA OF FOREST RESERVATIONS, 30th JUNE, 1948.
(Acres.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
Dedicated State Forests ..	5,350,638	4,939,493	3,777,913	(a) 252,320	3,399,799	1,717,221	19,437,384
Timber and Fuel Reserves ..	1,297,660	(b)	3,140,272	..	2,150,302	(c) 378,144	66,966,378
Total ..	6,648,298	4,939,493	6,918,185	252,320	5,550,101	2,095,365	26,403,762

(a) Includes Timber and Fuel Reserves.
(d) Incomplete.

(b) Not available.

(c) Excludes Fuel Reserves.

3. **Reforestation, Afforestation, etc.**—In the table below details are given of the area of indigenous forest improved or regenerated, the area of forest plantations and the number of persons employed by Forestry Departments for the year 1947-48.

FORESTRY : AREAS, AND NUMBERS EMPLOYED BY FORESTRY DEPARTMENTS,
1947-48.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Total area of indigenous forest improved or regenerated .. acres	1,468,741	1,071,691	485,153	9,928	527,357	(a)	3,562,870
Total area of effective plantations—							
Hardwoods .. acres	665	2,767	3,103	3,862	17,345	(b) 2,727	30,469
Softwoods ..	31,268	48,620	35,289	106,553	13,157	..	234,887
Number of persons employed "in Forestry Departments—							
Office staff ..	No. (c)	382	201	159	74	55	940
Field staff ..	"	182	354	1,715	549	(d) 361	3,462

(a) Not available.
totalling 34.

(b) Includes 173 acres of nurseries.

(d) Includes 257 other employees.

(c) Includes Wood Technology staff
(e) Includes 227 other employees.

4. **Revenue and Expenditure.**—The revenue and expenditure of State Forestry Departments for the years 1938-39 and 1943-44 to 1947-48 are shown below.

In New South Wales, Victoria and Tasmania, expenditure has exceeded revenue in each of the years shown. The excess of income over expenditure recorded annually since 1941-42 in South Australia indicates the successful development of the afforestation policy adopted in a State which is less endowed in natural forest resources than any of the other States. In Queensland, where surpluses were recorded previously, deficits occurred in 1946-47 and 1947-48, whilst in Western Australia in each of those years, the income received was greater than the amount expended.

STATE FORESTRY DEPARTMENTS : REVENUE AND EXPENDITURE.

(£.)

State.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
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REVENUE.

New South Wales ..	224,266	530,820	572,316	525,594	582,737	758,182
Victoria ..	198,157	838,729	817,036	883,376	641,405	594,923
Queensland ..	764,557	1,094,325	1,155,425	914,824	988,910	1,006,797
South Australia ..	101,312	319,300	336,934	359,861	399,208	465,012
Western Australia ..	145,724	227,350	265,034	244,408	302,789	300,199
Tasmania ..	32,765	48,524	55,043	57,417	70,570	81,574
Total ..	1,466,781	3,059,048	3,201,788	2,985,480	2,985,619	3,206,687

EXPENDITURE.

New South Wales ..	250,355	598,969	590,280	595,400	958,765	1,255,602
Victoria ..	406,175	1,306,750	1,416,800	1,310,882	2,034,714	1,756,462
Queensland ..	764,545	845,572	857,368	904,860	1,160,882	1,303,869
South Australia ..	182,633	308,372	312,181	324,198	369,024	442,660
Western Australia (b)	164,943	262,000	286,813	262,342	203,658	245,583
Tasmania ..	71,437	59,062	66,975	135,000	236,000	239,424
Total ..	1,840,088	3,380,725	3,530,417	3,532,682	4,963,043	5,243,600

(a) Includes expenditure from Relief Works, £167,611. (b) Includes expenditure from General Loan and Trust Funds, 1938-39, £136,254; 1943-44, £124,894; 1944-45, £115,423; 1945-46, £111,317; 1946-47, £119,602; 1947-48, £168,311.

§ 5. Forestry Production.

1. **Timber.** Particulars of logs treated and the production of rough sawn timber by sawmills and other woodworking establishments are shown by States in the following table for the year 1947-48. The information published in the corresponding table of issues prior to No. 37 was restricted to establishments classified as Forest Sawmills. In order not to omit the output of other mills not included under this classification, the table has been amended to include all mills as described above.

OUTPUT OF NATIVE TIMBER : ALL MILLS, 1947-48.
('000 sup. feet.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOGS TREATED, INCLUDING THOSE SAWN ON COMMISSION.(a)							
Hardwood ..	369,458	382,325	169,131	8,586	304,231	202,923	1,436,654
Softwood ..	129,929	22,884	193,510	66,866	5,782	6,841	425,812
Total ..	499,387	405,209	362,641	75,452	310,013	209,764	1,862,466

SAWN TIMBER PRODUCED FROM LOGS ABOVE.(b)							
Hardwood ..	248,616	246,183	108,559	6,222	129,158	105,755	844,493
Softwood ..	83,975	14,319	126,655	41,478	2,439	3,954	272,820
Total ..	332,591	260,502	235,214	47,700	131,597	109,709	1,117,313

(a) Includes logs used for plywood and veneer production.
of timber peeled or sliced for plywood and veneers.

(b) Includes the sawn equivalent

The following table shows logs used and the sawn timber produced in Australia for the years 1938-39 and 1943-44 to 1947-48.

OUTPUT OF NATIVE TIMBER : ALL MILLS, AUSTRALIA.

Particulars.	Unit.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Logs used—							
Hardwood ..	'000 super. feet (hoppus measure)	1,015,136	1,086,595	1,043,744	1,140,719	1,333,098	1,436,654
Softwoods ..	" "	293,680	393,900	374,111	369,360	409,242	425,812
Total ..	" "	1,308,816	1,480,495	1,417,855	1,510,079	1,742,340	1,862,466
Sawn Timber Produced—							
Sawn equivalent of Timber Peeled or Sliced for Plywood and Veneers—							
Hardwood ..	'000 super feet	(a)	2,201	2,015	2,670	2,924	2,981
Softwood ..	"	21,639	18,389	18,051	18,968	24,362	27,629
Total ..	"	21,639	20,590	20,066	21,638	27,286	30,610
Used for other purposes—							
Hardwood ..	"	695,376	599,242	593,329	643,815	777,113	841,512
Softwood ..	"		246,436	228,559	224,517	242,683	245,191
Total ..	"	695,376	845,678	821,888	868,332	1,019,796	1,086,703
Total Sawn Timber—							
Hardwood ..	"	526,229	601,443	595,344	646,485	780,037	844,493
Softwood ..	"	190,786	264,825	246,610	243,485	267,045	272,820
Total ..	"	717,015	866,268	841,954	889,970	1,047,082	1,117,313

(a) Not available for publication ; included with softwoods.

The next table shows the sawn output of native timber in sawmills and other wood-working establishments in each State for the years 1938-39 and 1943-44 to 1947-48.

SAWN OUTPUT (a) OF NATIVE TIMBER : ALL MILLS.

('000 sup. feet.)

State.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
New South Wales ..	179,350	259,035	245,975	252,108	300,945	332,591
Victoria ..	120,197	176,464	173,619	212,611	253,266	260,502
Queensland ..	193,250	204,201	194,138	189,912	219,745	235,214
South Australia ..	14,537	35,684	38,418	37,113	46,479	47,700
Western Australia ..	125,453	109,987	106,029	107,647	124,198	131,597
Tasmania ..	84,228	80,897	83,775	90,579	102,449	109,709
Total ..	717,015	866,268	841,954	889,970	1,047,082	1,117,313

(a) Includes the sawn equivalent of timber peeled or sliced for plywood and veneers.

In addition to the sawn timber shown in the preceding table, a large amount of other timber, e.g., sleepers, piles, poles, fencing material, timber used in mining, and fuel, is obtained from forest and other lands. Complete information in regard to the volume of this output is, however, not available. In Western Australia particulars are obtained of the quantities of timber hewn by contractors for the Railway Department, mines, etc., as well as of the quantities produced by other agencies, but the figures have not been included in the preceding tables. The quantities so produced in Western Australia in the five years shown in the preceding table were as follows :—1938-39, 35,862,540 sup. feet. ; 1943-44, 11,698,704 sup. feet ; 1944-45, 10,216,392 sup. feet ; 1945-46, 10,348,458 sup. feet ; 1946-47, 15,604,008 sup. feet ; and 1947-48, 17,210,844 sup. feet. The annual reports of the Forest Departments of the States contain particulars of the output of timber from areas under departmental control, but owing to lack of uniformity in classification and measurement, accurate determination of total production cannot be made. Moreover, there is a moderate quantity of hewn timber produced from privately owned land, but information regarding output is not available.

2. Paper and Wood Pulp.—(i) *Tasmania*. The manufacture of paper from Australian-grown timber has been established in three States. In Tasmania two large mills are making paper from indigenous hardwoods. The first of these started production of paper from imported pulp at Burnie in August, 1938, and so continued until the pulp mill, using local hardwood, came into operation a few months later. At this mill, pulp is produced by the soda process and the caustic soda necessary for cooking the wood and chlorine for bleaching the pulp are produced by a separate plant located alongside the mill. Two paper-machines are operated. The larger machine has the capacity to produce paper 180 inches wide at 800 feet per minute, while the smaller machine is capable of producing paper 90 inches wide at about 400 feet per minute. The paper produced covers a wide range of high class printing, writing, drawing, duplicating and blotting papers. At Boyer on the Derwent River, near Hobart, production of newsprint commenced in February, 1941. The newsprint is manufactured from locally ground wood pulp to which is added a small proportion of sulphite pulp imported from Canada. The paper-making machine installed is capable of making paper 161 inches wide at the rate of 1,200 feet per minute, and when running at full capacity can produce about 540 tons of newsprint per week. At both these mills logs are taken from the forests by means of tractors and transported to the mills by rail. Power is supplied by the Tasmanian Hydro-electric Commission and hardwood not suitable for pulping is used as fuel. During 1948-49, 57,869 cords of pulp wood and 43,734 cords of firewood were delivered to these mills.

(ii) *Victoria.* In Victoria the production of wood pulp for paper-making commenced in January, 1937, with a pilot plant having the capacity of about 3,000 tons of air-dried pulp per annum. In October, 1939 the main plant at Maryvale, with a capacity of 27,000 tons of pulp per annum, commenced operations. Associated with the pulp mill is a paper-making plant capable of producing about 20,000 tons of kraft paper per annum. The timber used at this mill consists mainly of hardwoods at present unsuitable for other purposes. In addition, a small quantity of pine, mainly thinnings, mill waste and special softwood for production of cellulose is used. During 1947-48 the wood taken from Crown Lands for the production of wood pulp and cellulose amounted to 2,930,061 cubic feet of which 2,800,295 cubic feet were hardwoods and 69,766 cubic feet were radiata pine.

(iii) *South Australia.* In South Australia a pulp and paper board mill commenced operations during 1941-42 near Millicent. When completed and in full production the mill will use considerable quantities of softwoods from the Mount Burr and Penola pine plantations. During 1947-48, 16,242,000 super. feet of pulp wood were produced.

3. *Other Forest Products.*—(i) *Veneers, Plywood, Etc.* Cutting of timber for the manufacture of veneers, plywood, etc., has been carried out in most States for a number of years. Recently, however, this has been considerably extended in all States, and much greater use has been made of local-grown timbers, both hard and softwoods. In recent years special attention has been paid to the selection of logs suitable for peeling.

The following table shows the production of plywood and veneers for each of the years 1938-39 and 1943-44 to 1947-48.

PLYWOOD AND VENEER PRODUCED.

State.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.

PLYWOOD ('000 SQ. FT., $\frac{3}{16}$ IN. BASIS).

New South Wales ..	24,194	12,999	15,844	19,545	22,323	23,726
Queensland ..	66,100	69,290	70,527	73,581	87,180	99,823
Other States ..	14,511	12,330	14,709	10,731	13,770	15,528
Total ..	104,805	94,619	101,080	103,857	123,273	139,077

VENEERS ('000 SQ. FT., $\frac{1}{16}$ IN. BASIS).

New South Wales ..	18,993	14,880	10,747	12,431	17,700	48,571
Queensland ..	12,375	15,500	5,487	19,012	27,276	15,477
Other States ..	440	15,096	1,554	2,590	21,752	14,202
Total ..	31,808	45,566	17,788	34,633	66,728	78,250

(ii) *Charcoal*. With the availability of additional petrol supplies towards the end of the 1939-45 War, the production of charcoal, which previously had a wide use as a substitute fuel during the war years, was considerably reduced and is now little higher than normal.

(iii) *Eucalyptus Oil*. Oil may be distilled from the foliage of all varieties of eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but considerable quantities are manufactured, particularly in Victoria. The value of oversea exports of eucalyptus oil distilled in Australia amounted in 1938-39 to £86,714; in 1943-44 to £124,148; in 1944-45 to £136,297; in 1945-46 to £201,948; in 1946-47 to £408,451; in 1947-48 to £323,800; and in 1948-49 to £138,304. The quantities exported in the years 1946-47 to 1948-49 were 1,680,461 lb., 1,481,318 lb. and 765,195 lb. respectively. The bulk of the product is shipped to the United Kingdom and the United States of America, Victoria being the principal exporting State. Large quantities of the crude oil are used locally in flotation processes in connexion with the recovery of gold and other minerals.

(iv) *Sandalwood and Sandalwood Oil*. Most of the sandalwood is produced in Western Australia where considerable quantities are gathered each year for export to Asiatic countries. Small quantities are also produced in South Australia, Queensland and New South Wales. Details of exports of sandalwood are shown in paragraph 3 (ii), § 6. Oil distilled from Western Australian sandalwood has a medicinal value and is used extensively in the manufacture of perfumes. Quantities of this oil are exported annually to the eastern States of Australia and oversea countries, principally the United Kingdom. Oversea exports of Australian sandalwood oil amounted in 1938-39 to £13,964; in 1944-45 to £11,390; in 1945-46 to £19,560; in 1946-47 to £59,145; and in 1947-48 to £38,327.

(v) *Grass Tree or Yacca Gum*. South Australia is the chief State producing this gum, which is used in the preparation of varnishes and lacquers. Quantities are also obtained in New South Wales and Western Australia but these are small. The production in South Australia during 1947-48 amounted to 1,120 tons, whilst the exports from Australia amounted to 798 tons valued at £12,314.

(vi) *Tan Barks*. The forests of Australia are capable of yielding a wealth of tanning materials; many species of eucalyptus and other genera contain varying proportions of tannin, chiefly in the bark, but also in the wood and twigs. Although many of these species contain higher percentages of tannin than are found in the barks of oak, chestnut and hemlock, formerly the chief source of tannin material in the northern hemisphere, scattered distribution has resulted in the richest tan-bearing species only being used in Australia. These are:—Golden wattle (*Acacia pycnantha*), black or green wattle (*Acacia decurrens* or *mollissima*), and mallet (*Eucalyptus astrigens*).

Up to 1913 the production of wattle bark was more than sufficient for local requirements, and an export trade was built up. The supply diminished during the six years ended 1926-27, and Australia imported on the average about 2,900 tons each year from Natal, where the plantations were originally started from Australian seed. From 1927-28 to 1938-39 exports exceeded imports in every year except 1936-37, but since 1939-40 there has been a considerable excess of imports. The chief exporting States are Western Australia, South Australia and Tasmania. This matter is referred to in tables appearing in § 6 following. The other valuable tan bark, mallet (*Eucalyptus astrigens*) of Western Australia, is not extensively used in Australian tanneries, but it is exported to Europe and other countries, where it is used for producing a tannin

extract. A brief account of work done by the Council for Scientific and Industrial Research in connexion with tanning materials is given in Official Year Book No. 22, p. 743. The production of extract from the bark of karri (*Eucalyptus diversicolor*), of which very large quantities are available at karri sawmills, has passed the experimental stage, and private enterprise has started production on a commercial scale. The experimental work in kino impregnated marri (*Eucalyptis calophylla*) bark is not yet complete. The production of tan bark in Australia approximated 25,000 tons per annum in the years prior to 1939. Since then production has declined and in 1945-46 reached the level of about 8,800 tons recovering to about 11,000 tons in 1946-47 and 1947-48. However, this diminution is offset by the increased use of vegetable tanning extract which rose from 3,686 tons in 1938-39 to 11,792 tons in 1947-48.

4. Value of Production—Gross and Net.—(i) *General.* The values of forestry production on a gross, local and net basis are shown in the following table for the years 1946-47 and 1947-48.

GROSS, LOCAL AND NET VALUE OF FORESTRY PRODUCTION.

(£.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.	Value of Other Materials Used in Process of Production.	Net Value of Production.(a)
1946-47.					
New South Wales ..	4,650,000	142,000	4,508,000	..	4,508,000
Victoria ..	3,840,530	390,427	3,450,103	504,209	2,945,894
Queensland..	3,547,000	510,000	3,037,000	..	3,037,000
South Australia ..	1,486,022	103,409	1,382,613	..	1,382,613
Western Australia ..	1,652,657	156,659	1,495,998	..	1,495,998
Tasmania ..	1,580,670	253,590	1,327,080	..	1,327,080
Total ..	16,756,879	1,556,085	15,200,794	504,209	14,696,585

1947-48.

New South Wales ..	5,928,000	187,000	5,741,000	..	5,741,000
Victoria ..	4,523,451	500,000	4,023,451	530,000	3,493,451
Queensland..	3,064,000	570,000	2,494,000	..	2,494,000
South Australia ..	1,801,185	101,012	1,700,173	..	1,700,173
Western Australia ..	1,824,300	218,913	1,605,387	..	1,605,387
Tasmania ..	1,977,180	143,730	1,833,450	..	1,833,450
Total ..	20,019,116	1,721,555	18,297,561	530,000	17,767,561

(a) No deduction has been made for depreciation and maintenance.

(ii) *States, 1938-39 to 1947-48* In the following table the net value of forestry production and the net value per head of population are given by States for the years 1938-39 to 1947-48.

NET VALUE OF FORESTRY PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
NET VALUE.(a) (£.)							
1938-39 ..	2,261,000	1,067,732	2,362,000	542,465	1,147,335	399,500	7,780,032
1939-40 ..	2,347,000	1,108,864	2,531,000	605,419	1,087,734	452,520	8,132,537
1940-41 ..	2,576,000	1,355,402	2,734,000	693,162	1,322,138	516,000	9,196,702
1941-42 ..	3,159,000	1,594,643	2,423,000	879,332	1,272,606	722,100	10,050,681
1942-43 ..	3,155,000	1,858,326	2,328,000	1,011,491	1,422,782	813,940	10,589,539
1943-44 ..	3,285,000	1,952,278	2,822,000	1,028,671	1,372,336	764,010	11,224,295
1944-45 ..	3,321,000	2,171,841	2,516,000	1,069,188	1,364,960	816,230	11,259,219
1945-46 ..	3,745,000	2,411,229	2,502,000	1,170,398	1,458,773	973,100	12,260,500
1946-47 ..	4,508,000	2,945,894	3,037,000	1,382,613	1,495,998	1,327,080	14,696,585
1947-48 ..	5,741,000	3,493,451	3,394,000	1,700,273	1,605,387	1,833,450	17,767,561

NET VALUE PER HEAD OF MEAN POPULATION. (£ s. d.)

1938-39 ..	0 16 6	0 11 5	2 6 10	0 18 3	2 9 2	1 16 2	1 2 6
1939-40 ..	0 17 0	0 11 9	2 9 7	1 0 3	2 6 1	2 3 4	1 3 5
1940-41 ..	0 18 6	0 14 2	2 13 0	1 3 2	2 15 9	2 12 0	1 6 4
1941-42 ..	1 2 5	0 16 4	2 6 9	1 9 0	2 13 7	3 11 6	1 8 0
1942-43 ..	1 2 2	0 18 11	2 4 9	1 13 2	2 19 8	4 3 11	1 10 6
1943-44 ..	1 3 5	0 19 8	2 13 6	1 13 5	2 17 4	4 4 2	1 11 7
1944-45 ..	1 2 11	1 1 8	2 7 1	1 14 4	2 16 4	4 8 1	1 11 5
1945-46 ..	1 5 6	1 3 11	2 6 2	1 17 1	2 19 6	4 19 10	1 13 9
1946-47 ..	1 10 5	1 8 11	2 15 4	2 3 2	3 0 2	5 4 3	1 19 1
1947-48 ..	1 18 2	1 13 9	3 1 0	2 12 1	3 3 1	7 0 1	2 6 6

(a) No deduction has been made for depreciation and maintenance.

5. *Employment.*—(i) *Forestry Operations.* The estimated number of persons engaged in forestry operations as at June, 1948 is shown in the following table. These estimates, which have been based upon pay-roll tax and other data, include working proprietors but exclude those engaged in the sawmilling industry whose particulars are given in the next table.

ESTIMATED NUMBERS ENGAGED IN FORESTRY, JUNE, 1948.

(Excluding Sawmilling Industry).

Sex.	N.S.W. (a)	Victoria.	Q'land.	S. Aust. (b)	W. Aust.	Tasmania.	Total.
Males ..	9,011	7,027	5,684	1,373	1,640	1,965	26,700
Females ..	13	14	5	16	10	4	62
Total ..	9,024	7,041	5,689	1,389	1,650	1,969	26,762

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

(ii) *Milling Operations.* Details of the number engaged, including working proprietors, in the milling operations of sawmills are given in the next table. Further details regarding the operations of these mills are given in Chapter XXIV.—“Manufacturing Industry”.

SAWMILLS : NUMBER ENGAGED, 1947-48.

Sex.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total. (a)
Males	7,893	5,346	5,604	1,533	2,549	1,983	24,908
Females	269	94	168	98	20	23	672
Total	8,162	5,440	5,772	1,631	2,569	2,006	25,580

(a) Excludes Northern Territory and Australian Capital Territory.

§ 6. Oversea Trade.

1. Imports.—(i) *Dressed Timber*. The quantities and values of timber imported into Australia during the years 1938-39 and 1945-46 to 1947-48 inclusive are shown in the following table according to countries of origin :—

DRESSED TIMBER : IMPORTS INTO AUSTRALIA.

Country of Origin.	Quantity ('000 sup. feet.)				Value (£).			
	1938-39.	1945-46.	1946-47.	1947-48.	1938-39.	1945-46.	1946-47.	1947-48.
United Kingdom ..	1	..	..	2	44	1	..	425
Canada	8,927	7,950	2,038	3,297	90,833	197,688	65,604	137,916
New Zealand .. ..	..	555	313	10	..	23,516	14,589	367
Other British Countries ..	3	..	1	145	21	..	..	5,746
Norway	4,209	..	43	2,094	43,297	..	1,106	90,924
Sweden	1,978	..	1,534	5,075	24,290	..	55,562	220,817
U.S. of America ..	2,242	2,179	1,153	2,245	22,029	74,349	61,253	122,060
Other Foreign Countries ..	418	..	..	103	6,163	..	..	4,057
Total	17,778	10,684	5,082	12,971	186,677	295,554	198,114	582,312

The figures in the table above exclude items such as architraves, veneers, plywood, staves, etc., quantities for which are either not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded amounted to £119,271 in 1947-48.

The bulk of the imports of dressed timber comes from Canada, New Zealand, Norway, Sweden and the United States of America. Practically the whole of this timber consists of softwoods used for lining, weatherboards, flooring, shelving, doors, etc.

(ii) *Undressed Timber*. Australian imports of undressed timber for the years 1938-39 and 1945-46 to 1947-48 are shown hereunder :—

UNDRESSED TIMBER (a) : IMPORTS INTO AUSTRALIA.

Country of Origin.	Quantity ('000 sup. ft.).				Value (£).			
	1938-39.	1945-46.	1946-47.	1947-48.	1938-39.	1945-46.	1946-47.	1947-48.
United Kingdom ..	115	209	199	103	9,984	11,410	16,397	24,014
Canada	296,948	70,171	87,853	48,148	1,115,562	806,425	2,311,521	1,423,466
Malaya (British) ..	165	..	41	312	1,264	..	1,595	6,311
New Zealand	11,193	5,037	7,199	13,956	157,967	98,544	123,772	342,614
Other British Countries ..	10,840	1,097	3,269	10,422	68,387	2,714	68,170	206,274
Japan	374	..	..	..	7,681	..	..	..
Netherlands East Indies ..	20	..	..	257	118	..	..	1,584
New Caledonia	1,671	..	..	6	5,796	17	..	55
Philippine Islands ..	6,879	3	..	2	66,371	35	..	34
Sweden	4,654	..	1,014	3,168	36,946	..	33,189	98,530
United States of America ..	12,245	26,814	22,348	57,735	191,221	432,470	477,104	1,453,104
Other Foreign Countries ..	2,994	81	3	296	27,027	6,372	2,149	29,106
Total	348,098	103,412	121,926	134,405	1,688,324	1,357,993	3,034,057	3,585,152

(a) Excludes timber not measured in super. feet.

By far the larger proportion of the undressed timber imports consists of softwood such as oregon, redwood, hemlock, western red cedar and yellow pine from Canada and the United States of America; kauri, rimu and white pine from New Zealand and other softwoods from Sweden. Amongst the hardwoods imported are mahogany from the United States of America, teak from Burma and other hardwoods from the Pacific Islands.

2. Exports.—(i) *Undressed Timber (excluding Railway Sleepers)*. The quantity and value of undressed timber, exclusive of railway sleepers, exported during the years 1938-39 and 1945-46 to 1947-48 are shown below, together with the countries of destination.

UNDRESSED TIMBER (EXCLUDING RAILWAY SLEEPERS) (a) : EXPORTS FROM AUSTRALIA.

Country to which Exported.	Quantity ('000 sup. ft.).				Value (£).			
	1938-39.	1945-46	1946-47.	1947-48.	1938-39.	1945-46.	1946-47.	1947-48.
United Kingdom ..	11,750	4,287	6,372	8,247	137,927	130,341	198,559	296,810
Canada ..	223	336	296	382	4,723	9,541	10,066	14,531
Hong Kong ..	98	214	467	163	1,058	6,974	15,971	17,105
Mauritius ..	354	99	371	275	4,520	2,609	10,148	6,922
New Zealand ..	17,145	5,384	7,142	8,561	245,194	139,259	186,146	267,889
Pacific Islands ..	1,637	541	1,550	327	29,471	56,792	40,042	9,999
Union of South Africa ..	7,164	1,393	1,951	3,807	80,668	36,056	55,387	117,630
Other British Countries ..	643	275	503	1,022	6,862	29,217	12,912	54,179
Belgium ..	1,286	..	352	217	19,347	..	12,657	9,160
United States of America ..	867	56	390	409	26,506	1,947	14,409	18,500
Other Foreign Countries ..	2,630	86	202	403	32,470	2,555	3,346	19,047
Australian Produce ..	43,797	12,671	19,596	23,813	538,746	415,791	559,613	830,072
Other Produce ..	541	27	583	564	6,079	951	10,756	43,063
Total ..	44,338	12,698	20,179	24,377	594,825	416,742	570,399	874,035

(a) Excludes timber not measured in super. feet.

The bulk of the exports of undressed timber were consigned to New Zealand, the United Kingdom, South Africa and the United States of America, and consisted largely of the Western Australian hardwoods, jarrah and karri, which have earned an excellent reputation for such purposes as harbour works and wood paving, etc. Considerable quantities of pole, pile and girder timber are also exported from New South Wales to New Zealand.

(ii) *Railway Sleepers*. Particulars of the quantities and values of railway sleepers exported, which are excluded from the previous table relating to undressed timber, are shown below.

RAILWAY SLEEPERS : EXPORTS FROM AUSTRALIA.

Country to which Exported.	Quantity ('000 sup. ft.).				Value (£).			
	1938-39.	1945-46.	1946-47.	1947-48.	1938-39	1945-46.	1946-47.	1947-48.
United Kingdom ..	1,438	497	194	739	14,167	14,021	4,683	20,950
Ceylon ..	5,334	540	..	2,705	53,339	12,902	..	109,366
Hong Kong ..	..	43	29	..	..	934	544	..
Mauritius ..	563	..	645	..	6,216	..	17,876	..
New Zealand ..	16,896	6,791	4,231	12,645	165,303	117,325	76,642	263,691
Pacific Islands (British) ..	201	138	180	341	2,341	2,440	3,160	7,808
Union of South Africa ..	4,941	841	614	873	49,412	23,975	16,725	37,352
Other British Countries ..	..	135	2,104	2,160	..	2,749	95,162	98,112
Egypt ..	4,198	..	..	..	41,986	..	..	..
Iran (Persia) ..	271	..	..	..	2,707	..	..	..
Iraq ..	165	..	..	..	1,696	..	..	..
Other Foreign Countries ..	29	98	342	42	291	1,096	5,606	787
Total ..	34,036	9,083	8,339	19,505	337,758	175,455	220,398	547,072
Number of Sleepers '000	1,268	363	332	773	..	..	..	..

3. **Classification of Imports and Exports.**—(i) *General.* The quantities and values of timber, according to items, imported and exported during the year 1947-48 are shown in the following table :—

TIMBER : ITEMS IMPORTED AND EXPORTED FROM AUSTRALIA, 1947-48.

Description.	Unit of Quantity.	Quantity.			Value (£).		
		Imports.	Exports.	Excess of Imports over Exports.	Imports.	Exports.	Excess of Imports over Exports.
Dressed (a)	'000sup. ft.	12,971	42	12,929	582,312	1,744	580,568
Undressed—							
Railway Sleepers	"	(b)	19,505	..	..	547,072	} 2,235,272
Other (a)	"	134,410	24,377	..	3,576,206	793,862	
Plywood, veneered or otherwise	Sq. ft.	1,808	67,609	-65,801	19	5,789	- 5,770
Palings .. ..	"	..	..	..	..	3	..
Shingles	"	1,250	..	1,250	..	..	3
Staves—							
Dressed, etc.	No.	60,369	..	60,369	13,636	..	13,636
Undressed	"	3,254	..	3,254	604	..	604
Laths	"	..	104,177	-104,177	19	623	- 604
Veneers	'000 sq. ft.	5,624	9,786	-4,162	80,189	93,204	-13,015
Spokes, rims, felloes, etc. .. ..	"	..	..	..	..	2,832	-2,832
Other.. ..	"	..	..	..	60,209	118,729	-58,520
Total .. ..		..	..	..	4,313,197	1,563,855	2,749,342

(a) Timber measured in super. feet only.

(b) Not recorded separately.

NOTE.—The minus sign (—) denotes an excess of exports.

(ii) *Sandalwood.* A considerable quantity of sandalwood is exported, principally from Western Australia, to Singapore and Hong Kong, where it is highly prized and largely used for artistic and ceremonial purposes. Particulars for the five years 1943-44 to 1947-48 are compared with 1938-39 in the following table :—

SANDALWOOD : EXPORTS FROM AUSTRALIA.

Country to which Exported.	Quantity (Tons).							Value (£).						
	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.		
Hong Kong	806	..	..	45	676	40	18,709	..	..	2,250	60,083	11,428		
India .. ..	..	..	..	..	25	..	812	..	..	..	1,500	..		
Malaya (British)	97	..	..	85	70	15	3,149	..	..	..	12,200	3,790		
Singapore .. ..	..	..	..	..	..	72	..	..	..	4,750	..	..
Other British Countries	17	..	..	13	25	11	545	..	..	584	2,730	2,860		
China	680	..	..	..	325	..	18,511	..	..	..	27,741	..		
Other Foreign Countries	17	..	..	..	..	..	574	..	..	..	13	..		
Total	1,648	..	..	143	1,121	147	42,330	..	..	7,584	110,267	35,571		

(iii) *Tan Bark.* Tan bark often appears both as an export and an import in the Australian trade returns. The following table refers to exports for the four years ended 1947-48, compared with 1938-39.

TAN BARK : EXPORTS FROM AUSTRALIA.

Country to which Exported.	Quantity (cwt.).					Value (£).				
	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
India .. ..	..	..	..	7,981	..	..	..	..	11,706	..
New Zealand ..	7,620	..	I	..	..	3,897	..	6	..	..
Other British Countries ..	40	..	..	522	..	27	..	..	768	..
Germany ..	8,251	..	..	..	..	3,582	..	..	..	..
Other Foreign Countries ..	2,309	..	..	1,170	..	1,124	..	..	558	..
Total ..	18,220	..	I	9,673	..	8,630	..	6	13,032	..

For a number of years prior to 1927-28 Australia had to import large quantities of tanning bark, but thereafter imports dropped to negligible quantities and exports rose annually to 89,061 cwt. in 1931-32. Since 1931-32 there has been a diminution of exports and by 1941-42 these had reached the low level of 421 cwt. The quantity imported did not rise appreciably until 1939-40 when imports were more than three times that of the previous year. Since that year there has been a considerable excess of imports, the Union of South Africa being almost the sole source of supply.

A comparison of the imports and exports of tan bark during 1938-39 and the five years ended 1947-48 is given in the following table :—

TAN BARK : IMPORTS AND EXPORTS, AUSTRALIA.

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
QUANTITIES—	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
Imports	6,199	105,315	90,024	86,367	65,056	69,012
Exports	18,220	..	..	1	9,673	..
Excess of imports over exports ..	— 12,021	105,315	90,024	86,366	55,383	69,012
VALUES—	£	£	£	£	£	£
Imports	2,318	61,050	54,570	56,986	49,456	64,696
Exports	8,630	..	..	6	13,032	..
Excess of imports over exports ..	— 6,312	61,050	54,570	56,980	36,424	64,696

NOTE.—The minus sign (—) denotes an excess of exports.

The imports consist almost exclusively of wattle bark from the plantations in South Africa. One species of Australian wattle, *Acacia mollissima*, is chiefly relied upon for the production of wattle bark in the South African plantations. Seed has been tried from New South Wales, Tasmania and Victoria, but it is stated that most of the seed is obtained from the best wattle bark areas in eastern Tasmania and western Victoria.

Two reasons are given to account for the success of the industry in the Union of South Africa :—(a) It is found that the treeless, grassy highlands of Natal are specially suitable for wattle culture, and the trees can therefore be grown in rows and economically attended to, while the necessary bark sheds and other appurtenances can be placed in the most advantageous positions; and (b) the availability of native labour.

(iv) *Other Tanning Substances.* Considerable quantities of tanning substances other than bark are imported annually into Australia. The total value in Australian currency of the importations in 1947-48 was £472,525, and was composed as follows :—Tanners' Bates, £12,617; wattle bark extract, £401,344; quebracho extract, £660; other extract, £17,863; and volonia, myrobalans, cutch, etc., £40,041.

Exports of tanning extracts from Australia amounted to £212,553 in 1947-48.

CHAPTER XXIII.

FISHERIES.

§ 1. General.

1. **Fish Stocks.**—Australia possesses a varied native fauna of freshwater and marine fish, including tropical and temperate species. In addition, certain exotic species have become acclimatized in the freshwater streams. The commercial fisheries exploit on-shore, demersal (bottom) and pelagic (surface) stocks. The on-shore stocks are at present of greatest importance.

The Australian marine fauna includes also a number of mollusca (oysters, scallops) and crustacea (crabs, prawns, crayfish) groups which are commercially exploited.

At certain times of the year whales of various species appear off the coasts.

2. **Fishing Areas.**—The principal fishing areas at present are the coastal lakes, streams, estuaries and beaches, from Cairns in Queensland to Ceduna in South Australia, and from Esperance to Geraldton in Western Australia. There are interruptions of variable size; for the most part, these fishing grounds are associated with the coastal streams. The demersal grounds fall into two classes—(a) the reefs from which cod and other tropical species are taken in tropical waters, and snapper in temperate waters; and (b) the grounds from which flathead, morwong, etc., are taken. The reefs extend intermittently from northern Queensland around the southern part of the continent to Shark's Bay in Western Australia. The flathead grounds lie on the continental shelf off south-east Australia, chiefly from off Crowdy Head to south of Cape Everard and further off the east Tasmanian coast off Babel Island southwards to Storm Bay. Other demersal grounds are known to exist in the Great Australian Bight but as yet are not exploited. The demersal shark grounds lie principally in Bass Strait and on the continental shelf off eastern South Australia. Other grounds have been located off southern Western Australia.

The grounds of existing pelagic fisheries include that for the Spanish mackerel off the north-eastern coast from about Coff's Harbour to Cairns and that for barracouta in Bass Strait and off eastern Tasmania. Horse mackerel is found in the waters of eastern Tasmania, the south-east coast of New South Wales, and Western Australia. Concentrations of other pelagic groups, including tuna and clupeoid species, are reported over the continental shelf at various points.

The pearl oyster inhabits the northern and western coastal waters from Cape York to Shark Bay. Edible oysters are found in the temperate waters of Queensland, New South Wales and Victoria. Some cropping of natural resources takes place in Queensland but the principal cultivation grounds are found in New South Wales. The scallop is found commercially only in Tasmanian waters.

Crabs of various species are found in practically all coastal waters. Prawns are taken in the temperate waters of Queensland and New South Wales. Crayfish are taken on reefs of the continental shelf in the waters of all southern States, the fishery extending (with a major interruption in the Bight) from Port Macquarie in New South Wales to Geraldton in Western Australia.

The whale appearances occur off the south of the continent, extending as far north as southern Queensland in the east and to beyond Shark's Bay in the west.

3. **Fishing Boats and Equipment.**—The fishing equipment includes almost every possible type of gear, and appropriate boats are employed. The on-shore equipment includes mesh-nets, trawl-nets, and traps of various types. The demersal reef-fishery is worked with traps, hand lines and other long lines. The demersal flathead-fishery

is worked by both otter trawl (with V.-D. gear) and Danish seine; in addition some hand-lining is carried out. The demersal shark fishery is worked by long lines. The pelagic mackerel-fishery employs trolling gear with lures of various types, while the pelagic barracouta fishery employs principally barbless jigs. The Commonwealth Scientific and Industrial Research Organization, Division of Fisheries, experimented with purse-seine nets for tuna and horse-mackerel and with drift nets and lampara nets for pilchards. A number of these nets is now on loan to commercial fishermen in New South Wales, Tasmania and Western Australia.

The boats for the on-shore fisheries are almost invariably small vessels fitted with low-power petrol engines. The vessels working the reefs are larger (up to 50 feet) and have more power. The otter trawl vessels are steam trawlers, while the Danish seine vessels are 40 to 70 feet in length with diesel engines. The shark boats have diesel power and range from 35 to 50 feet in length. For the operation of the purse-seine nets, a larger vessel of 75 feet has been secured by a crew experimenting with a 330 fathom tuna purse-seine in Tasmania and an 80 foot purse-seiner is nearing completion and will be used in South Australian waters.

4. Administration.—The fisheries are administered at present by State Departments implementing State laws. This administration includes licensing of men and boats, and restriction on fishing by prohibitions against fishing at certain times and places and by certain methods. In some States the quantity, type and construction of gear is subject to limitations and legal minimum sizes are prescribed.

In October, 1946 the Commonwealth Government appointed a Director of Fisheries and established a Commonwealth Fisheries Office in the Department of Commerce and Agriculture to co-ordinate fisheries administration. The functions of this office are set out in § 4, par. 3 hereafter and include fishing in extra-territorial waters, whaling, pearling, etc.

The Commonwealth Scientific and Industrial Research Organization, through its Fisheries Division, is responsible for fishery research (*see* § 4, par. 2 hereafter).

§ 2. Development and Present Condition of the Fishery.

1. Fisheries Proper.—(i) *General.* The earliest Australian fishery was on-shore. To this was soon added the demersal reef fishery using lines. At each centre of population this sequence has almost invariably been followed, and expansion of the industry up to about the year 1900 consisted chiefly of the extension of these operations into hitherto unworked areas. The taking of barracouta in Tasmanian waters was begun at least by 1880, if not earlier, but the main development of this fishery occurred between 1915 and 1925.

The first major development of the fishery came with the institution of trawling operations off the New South Wales coast in 1918 by the New South Wales Government, as a consequence of the results obtained from the exploratory work of the Federal Investigation ship *Endeavour*. The State enterprise failed, but the fishery was found very profitable by private enterprise, which had as many as sixteen steam trawlers operating at one time. In 1936 the use of Danish seine vessels began and the fleet of these vessels rapidly expanded, being given an exceptional opportunity by the requisitioning of the steam trawlers by the Navy. Subsequently, practically all the Danish seine vessels were also requisitioned. After the war, vessels requisitioned by the Services were returned to the industry and in 1946 a peak was reached and thirteen steam trawlers and 120 Danish seine vessels were licensed. The total catch of trawled fish in 1946-47 was 16,000,000 lb. However, by the end of 1947 many of these vessels, which had made satisfactory catches in 1946, found that the fish stocks, particularly of flathead, appeared to be seriously depleted. Of the species taken by the trawl fishery, tiger flathead, jackass fish and nannygai are the most important, and of these flathead may be regarded as the prime fish and commands a higher price. Since 1947 the composition of the catch has changed, because of depletion of the flathead stocks, and the lower priced fish have become a larger proportion of the catch. In 1949, twelve steam trawlers and 70 Danish seine vessels were licensed.

In Queensland waters the Spanish mackerel is taken by line fishermen, operating in off-shore waters out to the Barrier Reef between Gladstone and Cairns, with Townsville as the centre. This fishery started in 1930 and by 1942 production had risen to about 1,000,000 lb., but since then the catch has decreased considerably, mainly because the larger vessels then operating in the fishery were commandeered for the Services and smaller vessels have carried on the fishery.

In 1930 the fishery for snapper shark was started in south-eastern waters, particularly off the Victorian and Tasmanian coasts. This fishery extended rapidly its area of operations, particularly in the Bass Strait area and the south-east coast of South Australia, and the catch increased from 23,131 lb. in 1930 to a steady 3,000,000 lb. catch in each year since 1942. Great impetus was given to the fishery during war years by the demand for livers for fish oil production for medicinal purposes. This demand has continued and though the stocks of sharks appear to show signs of depletion, fishermen have been able to maintain the level of production by fishing on new grounds and over a wider area. Livers yield about 1,500 gallons of vitamin oil per annum, and the flesh is sold as "flake" for the most part in the Melbourne Fish Market.

The survey work of the Division of Fisheries of the Commonwealth Scientific and Industrial Research Organization has revealed stocks of various species of pelagic fish. Some of these are now being exploited by commercial fishermen. Tuna of various species are known to occur in Australian waters but, despite extensive surveys, no commercial quantities have yet been taken. Pilchards occur in the southern waters of Australia from Port Stephens to the south-west of Western Australia. Catches have been made by commercial crews using a lampara net and a small purse-seine at Jervis Bay on the New South Wales coast, in Port Phillip Bay in Victoria, at Coffin Bay in South Australia and at Albany in Western Australia. Anchovies in Port Phillip Bay and sprats in Tasmanian waters are caught in payable quantities though there is usually some difficulty in finding a market for them. Horse mackerel have been caught in commercial quantities off the east coast of Tasmania and off Eden in New South Wales. During March and April, 1949, 72 tons were caught in Tasmanian waters.

(ii) *Production.* Production for the year 1947-48 was about 76,000,000 lb., the increase in catch over the previous year being due to the larger catch of Australian salmon in Western Australia and the large catch in Tasmanian waters of barracouta which was canned for oversea export.

The movement in production since 1938-39 is shown by States, in the following table :—

RECORDED PRODUCTION OF FRESH FISH.

('000 lb.)

State.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
New South Wales ..	(a) 29,382	23,802	30,051	30,668	34,157	32,813
Victoria ..	12,840	9,723	9,310	11,923	11,538	9,745
Queensland ..	9,182	7,544	7,197	10,170	10,779	10,508
South Australia(a) ..	8,960	4,586	5,345	5,908	5,927	4,750
Western Australia(a) ..	5,841	2,490	3,001	4,368	5,035	6,953
Tasmania ..	(a) 2,393	5,606	8,786	8,676	7,479	11,288
Northern Territory ..	28	(b)	(b)	(b)	(b)	112
Total ..	68,626	53,757	63,690	71,713	74,915	76,169

(a) Year ended December previous.

(b) Not available.

2. **Oysters and Shell Fisheries.**—Initially the Australian oyster fisheries depended solely upon the harvesting of naturally grown stock in littoral and submarine areas. However, the stocks soon deteriorated and attention was turned to methods of cultivation. These have not been successful in Queensland, but in New South Wales there has been constant improvement in methods and the present technique in certain areas is highly efficient. In New South Wales peak production of 76,912 cwt. was reached in 1938, while production in 1947-48 was 58,693 cwt. The production for Australia in 1947-48 was 64,986 cwt. Scallops are taken by dredge in the D'Entrecasteaux Channel in Tasmania.

Cray fisheries have developed greatly in recent years and the development has been such as to permit an export trade of crayfish tails to America. The catch for 1947-48 was considerably higher than in any previous year, Tasmania, South Australia, and Western Australia being the chief centres of production. Details of the crayfish take are shown in the following table:—

RECORDED PRODUCTION OF CRAYFISH.
(doz.)

State.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
New South Wales ..	(a)13,467	4,596	6,540	7,427	7,681	13,021
Victoria ..	6,436	1,824	1,242	2,313	3,956	2,614
Queensland ..	..	..	..	..	..	..
South Australia(a) ..	22,000	17,200	12,100	18,365	23,375	30,174
Western Australia(a) ..	56,202	39,223	25,131	27,118	53,237	97,328
Tasmania ..	(a)65,652	63,668	82,762	69,077	92,186	115,791
Total ..	163,757	126,511	127,775	124,300	180,435	258,928

(a) Year ended December previous.

3. **Pearl-shell and Bêche-de-mer.**—Before the war pearl shelling was carried out in the tropical waters of Queensland, the Northern Territory, and Western Australia, mainly by Japanese and Malay divers, using diving apparatus, in waters varying from 4 to 20 fathoms in depth. During the war practically all of these operations were discontinued. After the war the policy of the Commonwealth Government was to prohibit indentured labour, but despite this restriction, by 31st December, 1947, there were 28 boats in commission off the Western Australian coast, operated by 267 men. In Queensland, pearling operations are centred at Thursday Island, where, by June, 1948, 93 boats were being operated, the men engaged numbering 966 including Torres Strait Islanders and Australian aboriginals.

Reference to inquiries into the pearl-shell fishing industry by a Royal Commission in 1912 and by the Tariff Board in 1935, appears on page 1031 of Official Year Book No. 37.

§ 3. Marketing and Distribution.

1. **Marketing.**—The greater portion of Australian fish is sold in metropolitan markets. In Queensland, fish marketing is under the control of a Fish Board, which has representatives of producers, wholesalers, consumers, and a Government nominee as chairman. A central market is located in Brisbane and there are branch markets or depots at 15 centres along the coast. The organization ensures that all fish is marketed through the correct channels, and the board has encouraged to a very marked extent the steadily increasing annual fish production of the State. The fish marketing methods in this State have proved most successful. In New South Wales the central market in Sydney

is conducted by the Chief Secretary's Department, and the port depots in various centres along the coast by fishermen's co-operatives. These co-operatives distribute the fish to local centres and to inland country districts, and send any balance of fish they may have to the central market in Sydney. In Victoria, South Australia, and Western Australia fish is sold in central markets by agents. The greater part of the catch of fish in Tasmania is either processed in canneries in that State or exported to the mainland. There is some interstate movement of fish from the northern rivers of New South Wales to Queensland, from Tasmania to New South Wales and Victoria, and from South Australia to Victoria.

2. Consumption of Fish.—Prior to the 1939-45 War, Australians consumed annually the fresh and canned equivalent of about 131,000,000 lb. of round fish, or 19.0 lb. per person. About 70,000,000 lb. was produced locally and the remainder was imported; that is, the average Australian ate about 10.2 lb. of Australian fish a year and the equivalent of 8.8 lb. of overseas fish. During the 1939-45 War, however, the quantity of fish entering civilian consumption in Australia was reduced to approximately 6 lb. (weight in the round) per person annually owing to the decline in local production, the steep drop in the imports of canned fish and the allocation of supplies for the Services and other priority needs. Although fish was in increased demand during the period of meat rationing, it is not, as in many countries, a staple item in the diet of Australia, and is still regarded rather as a luxury. The consumption per head of population during 1947-48 amounted to 5.7 lb. edible weight of fresh fish and 3.5 lb. of canned fish or a total of 16.8 lb. expressed in terms of fish in the round. This represents a total quantity consumed of 128,000,000 lb. in the round of which nearly 80,000,000 lb. was produced locally.

3. Processing, including Canning.—The equipment for handling fish has in the past been rather inadequate, but in most States since the war cold storage facilities have been improved and increased. In Queensland and New South Wales particularly, the depots which have been established at fishing ports have been equipped with cold storage space. In several States there has been a development of establishments equipped for snap freezing of fish, in particular the freezing of crayfish tails for export.

In all States there has been a development of facilities for light processing of fish, particularly for smoking.

The output of canneries rose from 3,717,248 lb. in 1946-47 to 9,731,702 lb. in 1947-48, representing an increase of over 260 per cent. Preliminary totals for 1948-49 indicate a further increase in production to about 10,500,000 lb. The quantities of locally-produced canned fish (excluding shell-fish) exported amounted to 883,409 lb. in 1946-47 and 916,199 lb. in 1947-48.

The number of canneries operating in Australia during 1948-49 totalled eighteen. Of these, eight were situated in Tasmania, four in New South Wales and Western Australia and one in South Australia and Victoria. These, however, do not include two factories engaged in the production of fish paste.

4. By-Products.—Processing of offal for fish-meals, etc., has been established in certain States. The processing of livers for vitamin-rich oils has been undertaken in several States and oil-production has been favourably developed.

§ 4. Inquiries and Research.

1. General. The Australian fishing industry has been the subject of a number of official inquiries seeking an explanation of the very slow rate of development and the unfortunate conditions prevailing within the industry as well as the paucity of supplies available to the public. The first of these inquiries to be noted was the meeting of State and Commonwealth representatives convened by the Development and Migration Commission with the object of reviewing the potentialities of the fishing industry of Australia. The conference which was held in Melbourne in September, 1927, confirmed the importance of establishing a marine biological institution to study the scientific problems connected with Australian fisheries. Committees were formed to discuss all the important problems of the industry and it was unanimously recommended at the second meeting of the conference held in July, 1929, that investigational work should be undertaken by the Commonwealth Government. The second enquiry of importance was that of the Tariff Board held in 1941 when it was concluded that the development of a prosperous fishing industry would be an important contribution to the war effort and that the stage had been

reached when additional Governmental assistance was desirable. The Board recommended that assistance of the Council for Scientific and Industrial Research should be continued and that a Commonwealth fisheries authority should be established.

In 1942 the Division of Fisheries of the Council for Scientific and Industrial Research prepared, on behalf of the Director-General of Manpower, a register of manpower in the industry and made suggestions for its rationalization under wartime conditions. As a result of these suggestions a Controller of Fisheries was appointed to co-ordinate and organize the industry. The programme included the study of production goals, the control and allocation of manpower, fuel and equipment, the organization of co-operatives within the industry and rationalization of marketing and distribution.

2. Commonwealth Scientific and Industrial Research Organization, Division of Fisheries.—Acting on the recommendation of the 1927-1929 Conference, mentioned above, the Commonwealth Government entrusted to the then Council for Scientific and Industrial Research the task of establishing a marine biological institution. In its original plans the Commonwealth provided a sum of £80,000, spread over a period of five years, for the following purposes:—(i) to procure a vessel specially designed for the exploration of pelagic or surface-swimming fish, but which could also carry out certain investigations of demersal or bottom-dwelling species; (ii) to undertake experiments in the canning of fish and the determination of the chemical composition of fish thought to be suitable for the manufacture of fish by-products; (iii) to determine, by tests, the best methods of curing and preserving fish, especially the more common varieties; and (iv) in co-operation with the State authorities, to undertake a study of the systems of distribution of fish in each State with a view to improving existing transport and marketing facilities. A research vessel constructed at a cost of £17,000 was commissioned in 1938 and a programme of work was laid down extending over a period of five years. During the first three years the investigation was confined to the south-eastern portion of the Australian coast; part of the work was extended later to the south-western portion of the Continent. A modern biological laboratory was established at Port Hacking in New South Wales.

The early work led the Council to place this programme on a permanent basis, and the Division of Fisheries has increased its staff and its work to include (1) an exploratory programme designed to survey new areas and study oceanographical, hydrological and planktological conditions and new fisheries, and (2) a biological programme designed to study the important existing fisheries, both marine and freshwater, shell fisheries, and seaweed resources.

Portions of this programme have already been completed, and much information regarding the pelagic fish (tuna, Australian salmon, horse mackerel or cowan young, kingfish, pilchards, anchovies and sprats) has been collected. As a result of this work commercial catches of sprats are now being made in Tasmania, and the Division's purse-seine net has been used by a commercial fishing crew to take several catches of horse mackerel in Tasmanian and southern New South Wales waters. After seeing experimental hauls with the lampara net by the crew of F.R.V. *Warren*, a commercial crew has taken 16½ tons of pilchards near Albany in south-west Australia.

An experimental shipment of the Pacific oyster from Japan is at present under observation in Australian waters to determine whether this oyster could be successfully transplanted to Australia.

Two research stations to be staffed by the Division have been provided by the Queensland Government; one, situated at Thursday Island, is being used for pearl-shell culture research while the other, at Dunwich, Moreton Bay, will be the centre of general fisheries research, although it will be used particularly for oyster cultivation experiments.

Surveys have been made of beds of the seaweed *Gracilaria* and this weed, and other seaweeds, have been used in the experimental production of agar. As a result of these experiments agar is now being produced commercially in sufficient quantities to supply the Australian market.

Of the original purposes for which the Division was planned, three have now passed to other institutions. The work of research in the canning of fish and the best methods of curing and preserving fish have been taken over by the Division of Food Preservation

and Transport of the Commonwealth Scientific and Industrial Research Organization, and the study of the systems of distribution of fish is now handled by the marketing section of the Division of Fisheries of the Department of Commerce and Agriculture.

3. **Commonwealth Fisheries Authority.**—The Commonwealth Fisheries Office, a section of the Department of Commerce and Agriculture, was established as a result of a recommendation in 1941 by the Tariff Board, after a public inquiry into the fishing industry, that a Commonwealth developmental authority should be established. During the 1939–45 War, Commonwealth control of the fishing industry was exercised by a Controller of Fisheries as part of the Department of War Organization of Industry. The Commonwealth Fisheries Office was established in 1946 and a Director of Fisheries was appointed. In accordance with the Tariff Board report, scientific research, as distinct from developmental and administrative functions, was left to the Commonwealth Scientific and Industrial Research Organization, which had established a Division of Fisheries for the purpose in 1937.

After the revocation of Commonwealth war-time powers, the Commonwealth and State spheres were fixed at an interstate conference in February, 1947. The Commonwealth is responsible for extra-territorial waters, whaling, pearling, rehabilitation of ex-servicemen in the fishing industry, fishery training schools, commercial development of fisheries, promotion of uniform conditions governing catches of various species of fish, statistics, information and publications.

In the discharge of its duty to ex-servicemen the Commonwealth Fisheries Office established a Fisheries Training School at Cronulla, New South Wales, and has conducted four training courses. Ex-servicemen were thoroughly trained in all theoretical and practical aspects of the industry which included deep sea training on the School's own training trawlers.

To assist the rehabilitation of the pearling industry the Fisheries Office appointed a pearling officer with a life-time experience of the industry. By the end of the 1948 season 1,176 tons of pearl-shell had been obtained as compared with 2,543 tons in 1938–39.

The Fisheries Office also carried out extensive work preparatory to the re-establishment of coastal whaling in Australia after the lapse of about 20 years. For this purpose it brought a Norwegian whaling expert to Australia on a year's engagement. Following this developmental work by the Fisheries Office, legislation was passed in 1949 to enable a Government Whaling Commission to be established to begin coastal whaling in Western Australia.

The Fisheries Office publishes every second month a technical journal *Fisheries Newsletter*, which is supplied as a technical and information service to all full-time professional fishermen in Australia.

The Fisheries Office is currently engaged in preparatory work to establish pelagic fishing in Australia for tuna and other valuable canning fish.

4. **North Australia Development Committee.**—In 1945 the North Australia Development Committee gave considerable attention to the fisheries resources of North Australia and recommended that a hydrological and oceanographical survey should be made of the area. It also suggested that a biological survey should be made of pearl shell with particular reference to the possibility of instituting pearl shell culture. It recommended that all information regarding the area should be compiled and made available for scientific workers. It also recommended that an economic survey of the fisheries resources should be made, comparing them particularly with those of the Netherlands East Indies.

5. **Whaling.**—The Whaling Industry Act 1949, passed by the Commonwealth Parliament for the development of the whaling industry, provides for the creation of the Australian Whaling Commission consisting of three members with the powers necessary to establish the industry in Australia. It is intended that a shore station will be erected in Western Australia at Shark Bay using three chaser vessels.

The International Whaling Commission, of which Australia is a member, controls whaling in the Antarctic. The Commission held its first meeting in London in 1949 and Australia was represented by the Director of Fisheries.

Since the Japanese were permitted to resume whaling in the Antarctic in 1946, an inspector of the Commonwealth Fisheries Office has accompanied the whaling fleet on each of the three seasons to police on behalf of Australia their observance of the International Whaling Regulations.

§ 5. The Fishing Industry.

1. **Boats and Men Engaged, and Take.**—(i) *General Fisheries.* The returns have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts are shown in the following tables. In connexion with the lower figure for Australia for 1947-48 shown for men engaged it should be noted that the New South Wales element in this figure relates to the number of fishermen's licences issued and not to the actual number of men engaged and that the number of fishermen's licences issued in New South Wales fell from 4,892 in 1946-47 to 3,419 in 1947-48. This reduction of 1,473 in 1947-48 followed a reduction of 1,155 in the previous year. This marked decrease in fishermen's licences was due to the enforcement of the law restricting the issue of such licences to persons deriving a substantial portion of their income from personal exertion from the capture and sale of fish. In all other States—except in Western Australia where the numbers were practically unchanged—the numbers of men engaged increased in 1947-48.

GENERAL FISHERIES, 1947-48.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust. (a)	W.Aust. (a)	Tas.	Nor. Terr.	Australia.
No. of boats engaged ..	2,920	1,298	3,363	1,782	674	1,013	9	11,059
Value of boats and equip- ment .. £	1,791,898	660,459	663,696	552,500	248,757	300,000	5,000	4,222,310
No. of men engaged ..	(b) 3,419	2,471	5,676	3,605	1,479	1,689	39	18,378
Total take of—								
Fish .. cwt.	292,975	87,005	93,820	42,411	62,081	100,789	1,000	680,081
£	1,056,383	446,701	496,572	200,000	289,709	329,245	8,500	2,827,110
Crayfish .. doz.	13,021	2,614	..	30,174	97,328	115,791	..	258,928
£	25,284	4,700	..	45,250	77,861	127,370	..	280,465
Prawns .. cwt.	12,490	..	2,261	..	264	..	..	15,015
£	138,731	..	19,020	..	1,477	..	..	159,228
Crabs .. doz.	20,184	..	16,492	..	1,083	..	..	37,759
£	3,026	..	(c) 13,626	..	434	..	..	17,086

(a) Year ended December, 1947.
value of 60 turtles.

(b) Fishermen's licences issued.

(c) Includes £200, the

Figures for Australia for the years 1938-39 and 1943-44 to 1947-48 are shown in the table below :—

GENERAL FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
No. of boats engaged	5,462	6,867	8,086	8,594	10,868	11,059
Value of boats and equipment .. £	649,026	967,598	1,455,001	2,193,349	3,763,998	4,222,310
No. of men engaged (a)	9,081	12,400	14,612	18,429	19,002	18,378
Fish obtained—						
Quantity .. cwt.	612,735	479,971	568,661	640,298	668,885	680,081
Gross value .. £	1,385,281	1,929,329	2,168,676	2,517,540	2,851,936	2,827,110
Crustaceans obtained—						
Gross value .. £	134,866	246,576	213,343	210,402	332,799	456,779

(a) See letterpress above.

(ii) *Edible Oyster Fisheries.* Edible oyster fisheries are of small dimensions outside New South Wales and Queensland. The available returns show the following takes during 1947-48 in these States :—New South Wales, 58,693 cwt., value £246,710; Queensland, 6,277 cwt., value £15,916. In Tasmania the scallop is far more important than the oyster, and in 1947-48 the take was valued at £33,115.

Figures for Australia for the years 1938-39 and 1943-44 to 1947-48 are shown in the following table:—

EDIBLE OYSTER FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
No. of boats engaged	754	816	861	892	845	815
No. of men engaged ..	850	790	813	883	666	626
Oysters obtained—						
Quantity (b) cwt.	89,145	55,211	62,518	71,062	75,632	72,456
Gross value (a) £	132,201	137,698	204,465	238,919	266,815	295,763

(a) Includes scallops in Tasmania, valued at £14,500 in 1938-39; £15,428 in 1943-44; £16,300 in 1944-45; £30,750 in 1945-46; £37,256 in 1946-47; and £33,115 in 1947-48. (b) Includes scallops in Tasmania, 4,723 cwt. in 1943-44; 5,019 cwt. in 1944-45; 8,857 cwt. in 1945-46; 7,920 cwt. in 1946-47; and 7,470 cwt. in 1947-48; 1938-39 weight not available.

(iii) *Pearls, Pearl-shell and Bêche-de-mer—States.* At the outbreak of war in the Pacific in December, 1941, the pearling industry ceased to operate. Operations were resumed in Queensland in 1944-45 but in Western Australia and Northern Territory not until 1946-47. There is no pearl-shell industry in the other States. The following table shows particulars of equipment used, men engaged and production for the year 1947-48:—

PEARL, PEARL-SHELL AND BÊCHE-DE-MER FISHERIES, 1947-48.

State or Territory.	Boats Engaged.	Value of Boats and Equipment.	Men employed.	Pearl-shell.		Gross Value of Pearls obtained.	Gross Value of Bêche-de-Mer obtained.	Trochus-shell.	
				Quantity obtained.	Gross Value.			Quantity obtained.	Gross Value.
	No.	£	No.	Tons.	£	£	£	Tons.	£
Queensland ..	93	178,650	(a) 966	403	218,900	..	500	262	18,120
W. Australia (b)	28	63,500	267	320	196,365	1,294	..	10	669
Nor. Territory ..	2	5,000	12	(c) 3	60	..	..	..	..
Australia ..	123	247,150	1,245	723	415,325	1,294	500	272	18,729

(a) Includes Torres Strait Islanders and Australian aboriginals.

December, 1947.

(c) Hundredweight.

(b) Year ended 31st

(iv) *Australia.* A summary of the principal statistics relating to pearl, pearl-shell and bêche-de-mer fisheries is given in the following table for the years 1938-39 to 1940-41 and 1945-46 to 1947-48.

Details of exports of these items are given in § 6, par. 3 hereafter.

PEARL, PEARL-SHELL AND BÊCHE-DE-MER FISHERIES : AUSTRALIA.

Particulars.	1938-39.	1939-40.	1940-41.	1945-46.	1946-47.	1947-48.
Boats engaged	No. 181	167	162	150	127	123
Value of boats and equipment	£ 108,133	104,450	150,017	51,250	170,820	247,150
Men engaged	No. 1,750	1,408	1,540	717	1,141	1,245
Pearl-shell obtained—						
Quantity .. tons	2,543	2,149	2,018	53	309	723
Value .. £	222,281	198,264	245,672	31,800	186,584	415,325
Value of—						
Pearls obtained (b) £	3,397	2,620	1,584	..	810	1,294
Bêche-de-mer obtained .. £	8,145	669	6,914	..	2,610	500
Trochus-shell obtained—						
Quantity .. tons	321	429	276	371	669	272
Value .. £	23,823	36,370	10,286	48,795	50,335	18,729

(a) Queensland only available.

(b) Incomplete; as returned.

2. Value of Production—Gross and Local.—(i) *General.* Although statistics of the value of production of the fishing industry have been on an established basis for some years, attention is drawn to the fact that the actual collection of statistics of the quantity of fish taken presents many difficulties and consequently any defects which may occur in their collection must necessarily be reflected in the value of production. Particulars of the value of other materials used in the process of production are not available for all States, so the values can only be stated at the point of production and not on a net basis as has been done with other industries. Variations in the relative proportions of marketing costs to gross production suggest that complete uniformity in method has not yet been attained.

GROSS AND LOCAL VALUE OF FISHERIES PRODUCTION.

(£.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.	Value of other Materials used in process of Production.	Net Value of Pro- duction.(a)
1946-47.					
New South Wales ..	1,518,000	216,000	1,302,000	104,000	1,198,000
Victoria ..	624,094	89,266	534,828	(b)	(b)
Queensland ..	693,000	150,000	543,000	140,000	403,000
South Australia ..	288,875	35,492	253,383	(b)	(b)
Western Australia ..	317,394	4,835	312,559	82,170	230,389
Tasmania ..	347,070	..	347,070	(b)	(b)
Total (c) ..	3,788,433	495,593	3,292,840	(b)	(b)

1947-48.

New South Wales ..	1,470,000	246,000	1,224,000	209,000	1,015,000
Victoria ..	525,873	75,217	450,656	(b)	(b)
Queensland ..	783,000	170,000	613,000	160,000	453,000
South Australia ..	245,250	31,174	214,076	(b)	(b)
Western Australia ..	567,749	3,945	563,804	77,220	486,584
Tasmania ..	489,730	..	489,730	(b)	(b)
Total (c) ..	4,081,602	526,336	3,555,266	(b)	(b)

(a) No deduction has been made for depreciation and maintenance.

(b) Not available.

(c) Excludes production in the Northern Territory.

(ii) *States, 1938-39 to 1947-48.* In the following table the local value of fisheries production and the local value per head of population are given by States for the years 1938-39 to 1947-48. Local value is gross value less marketing costs and is the value at the place of production. The value of materials used in the course of production is not available for all States and consequently production is valued at that point. These values therefore overstate the net values by the extent of these costs.

LOCAL VALUE OF FISHERIES PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL VALUE.(2)							
(£).							
1938-39 ..	620,000	176,919	277,000	220,401	269,894	90,350	1,654,564
1939-40 ..	508,000	199,632	285,000	202,000	252,637	109,910	1,557,388
1940-41 ..	517,000	244,444	330,000	227,987	251,529	96,830	1,667,790
1941-42 ..	619,000	387,462	185,000	245,301	226,945	109,570	1,773,278
1942-43 ..	830,000	377,418	242,000	277,014	117,202	86,450	1,930,084
1943-44 ..	728,000	345,756	272,000	240,347	160,088	221,350	1,967,541
1944-45 ..	1,023,000	339,043	277,000	163,164	154,527	277,660	2,234,094
1945-46 ..	1,046,000	465,625	437,000	230,031	203,454	217,240	2,599,950
1946-47 ..	1,302,000	534,828	543,000	253,383	312,559	347,070	3,292,840
1947-48 ..	1,224,000	450,656	613,000	214,076	563,804	489,730	3,555,266

LOCAL VALUE PER HEAD OF MEAN POPULATION.

(s. d.)

1938-39 ..	4 6	1 11	5 6	7 5	11 6	7 8	4 9
1939-40 ..	3 8	2 1	5 7	6 9	10 9	9 2	4 5
1940-41 ..	3 9	2 7	6 5	7 7	10 7	8 0	4 8
1941-42 ..	4 5	4 0	3 7	8 1	9 7	9 1	5 0
1942-43 ..	5 10	3 10	4 8	9 1	4 11	7 2	5 4
1943-44 ..	5 2	3 6	5 2	7 10	6 8	18 2	5 5
1944-45 ..	7 0	3 5	5 2	5 3	6 4	22 6	6 1
1945-46 ..	7 2	4 7	8 1	7 4	8 4	17 4	7 0
1946-47 ..	8 9	5 3	9 11	7 11	12 7	27 3	8 9
1947-48 ..	8 2	4 4	11 0	6 7	22 2	37 5	9 4

(a) No deduction has been made for depreciation and maintenance.

3. **Fish Preserving.**—The attempt to establish the fish preserving industry at the commencement of this century met with little success although a bounty was paid to encourage production. The industry, however, has continued to operate, but there was no marked development until about 1945-46. In that year, production of canned fish amounted to 1,700,000 lb., in 1946-47 to 3,700,000 lb. and in 1947-48 to 9,700,000 lb.

In addition to the canning of fish, other fish products are obtained. The quantities produced during 1947-48 were 865,511 lb. of smoked fish and 1,524,491 lb. of fish paste.

In 1939 New South Wales and Tasmania were the only producing States, but by 1941 the industry had been extended to South Australia and Western Australia. Details of production are given in the following table for the years 1938-39 and 1943-44 to 1947-48.

PRODUCTION OF CANNED FISH : AUSTRALIA.

Particulars.	1938-39.	1943-44.	1944-45. (a)	1945-46.	1946-47.	1947-48.
Number of factories operating ..	3	7	8	11	12	16
Quantity .. lb.	603,302	533,740	1,038,771	1,683,612	3,717,248	9,731,702
Value .. £	13,700	43,856	102,607	147,016	326,078	727,660

(a) Incomplete.

The varieties canned in the various States differ according to the catch available, but separate details for each variety are not available. In New South Wales salmon is the principal variety, while in South Australia there are more varieties, including mullet, salmon, garfish, etc. In Western Australia herrings, crayfish and mullet are included, and in Tasmania salmon and crayfish.

4. State Revenue from Fisheries.—The revenue from fisheries in each State during the year 1947-48 is shown hereunder together with the totals for the previous four years and 1938-39 :—

FISHERIES : REVENUE, 1947-48.

(£.)

State or Territory.	Licences.	Leases.	Fines and Forfeitures.	Other Sources.	Total
New South Wales ..	6,208	11,154	120	894	18,376
Victoria	2,337	68	304	23	2,732
Queensland	7,261	2,332	540	110	10,243
South Australia (a) ..	3,600	..	31	..	3,631
Western Australia (a) ..	2,322	..	28	1,419	3,769
Tasmania	2,983	..	..	399	3,382
Northern Territory ..	39	..	..	..	39
Total, 1947-48 ..	24,750	13,554	1,023	2,845	42,172
1946-47	22,650	16,074	1,404	665	40,793
1945-46	21,557	14,271	1,369	9,540	46,737
1944-45	17,021	12,724	612	861	31,218
1943-44	14,300	13,670	1,092	656	29,718
1938-39	15,563	12,446	1,397	4,867	34,273

(a) Year ended 31st December, 1947.

§ 6. Oversea Trade in Fishery Products.

1. Imports of Fish.—The large importations of fish and fish products each year give further evidence of the desirability of developing the fishing industry of Australia. Imports for the years 1944-45 to 1948-49 in comparison with 1938-39 are shown below :—

FISH AND FISH PRODUCTS : IMPORTS INTO AUSTRALIA.

Classification.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
QUANTITY (CWT.).						
Fish—						
Fresh or preserved by cold process—						
Oysters in shell	635	..	..	..	..	3
Other	83,393	22,711	23,268	46,196	73,060	100,899
Potted or concentrated ..	9,435	18	112	2,153	12,909	3,012
Preserved in Tins—						
Fish—						
Herrings	38,917	362	9,305	45,373	47,236	95,994
Pilchards	(a)	(a)	2,958	68	36,329	3,740
Salmon	166,695	57,423	31,785	10,540	12,031	2,544
Sardines (including Sild)	29,372	265	1,849	7,780	58,733	61,962
Other	14,306	52,913	6,607	9,942	24,432	8,682
Shell Fish—						
Crustaceans	6,829	99	260	301	4,627	1,623
Oysters	1,939	2	294	4	1	29
Other	(a)	(a)	111	194	297	100
Smoked or Dried (not salted)	8,122	122	400	6,870	26,090	32,331
N.E.I. (including salted) ..	7,987	1,032	3,879	6,309	3,202	3,319
VALUE (£).						
Fish—						
Fresh or preserved by cold process—						
Oysters in Shell	641	4	..	..	..	62
Other	248,742	122,901	147,386	269,247	417,971	631,549
Potted or concentrated ..	111,269	919	6,194	38,670	205,114	68,077
Preserved in Tins—						
Fish—						
Herrings	125,961	2,178	71,780	303,263	470,549	961,471
Pilchards	(a)	(a)	17,000	5,668	303,488	29,798
Salmon	651,838	378,741	162,665	94,115	124,824	26,406
Sardines (including Sild)	165,959	4,231	23,417	118,823	1,061,647	1,269,532
Other	58,247	347,223	116,482	116,160	253,791	124,705
Shell Fish—						
Crustaceans	64,011	1,413	4,090	4,494	81,584	31,335
Oysters	12,738	20	3,774	17	19	500
Other	(a)	(a)	794	1,785	2,351	1,278
Smoked or Dried (not salted)	21,483	731	1,613	40,088	146,628	172,694
N.E.I. (including salted) ..	9,065	8,456	20,050	34,110	16,125	23,025
Total	1,470,854	866,817	585,147	1,026,446	3,144,091	3,340,432

(a) Not recorded separately.

Canned fish constituted by far the largest proportion of the imports; salmon from Canada, herrings from Canada and the United Kingdom, pilchards from the Union of South Africa and sardines from Norway were the chief varieties imported. The potted fish came chiefly from the United Kingdom and New Zealand, which also supplied a considerable proportion of the fresh fish imported in 1948-49; the bulk of the remainder came from the Union of South Africa. The small import of oysters was supplied by New Zealand, which has also furnished the bulk of the crustaceans imported in recent years.

2. **Exports of Fish.**—During 1948-49 the exports of fish of Australian origin were as follows :—oysters in shell, 918 cwt., £6,605; other fresh or preserved by cold process, 19,594 cwt., £399,186; potted or concentrated, 1,670 cwt., £47,651; fish preserved in tins, 37,435 cwt., £377,075; shell fish in tins, 176 cwt., £2,529; smoked or dried, 146 cwt., £2,234 and other fish, 1 cwt., £9.

3. **Exports of Pearl and other Shell.**—The exports of pearl, tortoise and trochus-shell of Australian origin are shown hereunder for the years 1938-39 and 1944-45 to 1948-49 :—

PEARL, TORTOISE AND TROCHUS-SHELL : EXPORTS FROM AUSTRALIA.

Article.		1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Pearl-shell	cwt.	52,532	401	959	5,535	15,915	27,885
	£	244,266	5,198	16,917	149,975	408,681	606,767
Tortoise-shell	cwt.	4	..	..	3	134	..
	£	151	469	36	155	470	35
Trochus-shell	cwt.	9,108	3,481	5,466	16,424	10,096	15,547
	£	34,166	23,040	39,280	81,154	49,888	73,012
Other	cwt.	..	..	243	37	135	157
	£	..	..	3,037	770	1,240	1,564

CHAPTER XXIV. MANUFACTURING INDUSTRY.

NOTE.—Working proprietors are included in all cases in the "Number of Persons Engaged".

Single-year tables in this issue relate to the year 1947-48 and in the immediately preceding issue to the year 1945-46. Corresponding tables for 1946-47 may be found in the *Production Bulletin* 1946-47, No. 41, Part I.—Secondary Industries

§ 1. Number of Factories.

1. Number of Factories in each State.—For statistical purposes, a "factory" was defined by the Conference of Statisticians in 1902 as any factory, workshop or mill where four or more persons are employed or power is used. The statistics which follow should be read in the light of this definition. The following table shows the number of factories in each State for the five years 1943-44 to 1947-48 compared with 1938-39 :—

FACTORIES : NUMBER.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	9,464	9,250	3,087	2,067	2,129	944	26,941
1943-44 ..	10,755	9,317	2,652	2,149	1,807	994	27,674
1944-45 ..	11,359	9,669	2,783	2,132	1,931	1,006	28,930
1945-46 ..	12,287	10,195	2,945	2,395	2,280	1,082	31,184
1946-47 ..	13,961	10,949	3,367	2,707	2,615	1,169	34,768
1947-48 ..	15,194	11,642	3,642	2,865	2,788	1,225	37,356

2. Number of Factories in Industrial Classes.—(i) *Australia.* The next table shows the number of factories in Australia during 1938-39 and the years 1943-44 to 1947-48 classified in the industrial classes agreed upon by the Conference of Statisticians in 1930. This classification, which was introduced during 1930-31, superseded the grouping which had been in use since 1902. The definition of a factory adopted at the Conference of Statisticians in 1902 is, however, still used. Details of some of the principal industries included in the table will be found in § 9 hereinafter.

FACTORIES : NUMBER IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
I. Treatment of Non-metalliferous Mine and Quarry Products	564	417	458	591	743	933
II. Bricks, Pottery, Glass, etc. ..	471	289	318	410	481	517
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	666	816	862	886	929	975
IV. Industrial Metals, Machines and Conveyances	7,255	7,788	8,173	8,816	10,055	10,910
V. Precious Metals, Jewellery and Plate ..	290	258	267	337	465	555
VI. Textiles and Textile Goods (not Dress) ..	611	821	865	883	930	982
VII. Skins and Leather (not Clothing or Footwear)	533	563	581	651	703	727
VIII. Clothing (except Knitted)	4,314	4,462	4,773	5,215	5,733	6,069
IX. Food, Drink and Tobacco	5,202	5,457	5,664	5,865	6,236	6,475
X. Woodworking and Basketware	2,822	2,799	2,873	3,148	3,608	4,001
XI. Furniture of Wood, Bedding, etc. ..	1,149	917	959	1,140	1,407	1,568
XII. Paper, Stationery, Printing, Book-binding, etc.	1,816	1,673	1,688	1,703	1,779	1,852
XIII. Rubber	299	275	286	308	345	371
XIV. Musical Instruments	34	35	37	41	48	56
XV. Miscellaneous Products	413	624	650	714	832	899
Total, Classes I. to XV.	26,439	27,194	28,454	30,708	34,294	36,890
XVI. Heat, Light and Power	502	480	476	476	474	466
Grand Total	26,941	27,674	28,930	31,184	34,768	37,356

Although not the best index of manufacturing activity, the number of factories affords some indication of the development of secondary industries. From 1931-32 to 1940-41 the number of factories increased each year but in the two succeeding years there were decreases. However, this was followed by increases in 1943-44 and each succeeding year to 1947-48 when the number of factories in Australia reached the record total of 37,356 or 38.7 per cent. greater than in 1938-39.

(ii) *States, 1947-48.* The following table shows the number of factories in each State in 1947-48, classified according to the nature of the industry :—

FACTORIES : NUMBER IN INDUSTRIAL CLASSES, 1947-48.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-Metalliferous							
Mine and Quarry Products ..	350	316	63	92	74	38	933
II. Bricks, Pottery, Glass, etc. ..	251	120	39	54	39	14	517
III. Chemicals, Dyes, Explosives,							
Paints, Oils and Grease ..	501	281	57	71	46	19	975
IV. Industrial Metals, Machines, Con-							
veyances ..	4,486	3,390	1,014	848	894	278	10,910
V. Precious Metals, Jewellery and							
Plate ..	248	176	33	46	44	8	555
VI. Textiles and Textile Goods							
(not Dress) ..	346	528	26	41	27	14	982
VII. Skins and Leather (not Clothing or							
Footwear) ..	332	258	49	45	32	11	727
VIII. Clothing (except Knitted) ..	2,750	2,105	363	405	377	69	6,069
IX. Food, Drink and Tobacco ..	2,294	1,785	940	648	532	276	6,475
X. Woodworking and Basketware ..	1,581	988	567	230	264	371	4,001
XI. Furniture of Wood, Bedding, etc.	540	485	178	137	157	71	1,568
XII. Paper, Stationery, Printing, Book-							
binding, etc. ..	764	652	164	125	119	28	1,852
XIII. Rubber ..	145	111	42	38	21	14	371
XIV. Musical Instruments ..	25	15	3	7	6	..	56
XV. Miscellaneous Products ..	449	326	42	34	39	9	899
Total, Classes I. to XV. ..	15,062	11,536	3,580	2,821	2,671	1,220	36,890
XVI. Heat, Light and Power ..	132	106	62	44	117	5	466
Grand Total ..	15,194	11,642	3,642	2,865	2,788	1,225	37,356

§ 2. Classification of Factories according to Number of Persons Engaged.

1. *General.*—Prior to 1945-46 the classification of factories used ended at the group "Over 100". This was regarded as too restricted as it did not permit of any analysis of the development of factories in size groups above 100 employees. In consultation with the State Statistical Bureaux, it was agreed to extend, in 1945-46, the classification of factories according to size in the manner shown in the table below in respect of numbers of factories and, in the table which follows, in respect of numbers employed.

2. *States, 1947-48.*—The following table shows, for each State, the number of factories classified according to the number of persons engaged in 1947-48 :—

FACTORIES : CLASSIFICATION ACCORDING TO SIZE OF FACTORY, 1947-48.

Size of Factory (Persons engaged).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
NUMBER OF FACTORIES.							
Under 4 ..	4,402	3,314	930	738	1,219	388	10,991
4 ..	1,372	1,025	373	260	139	127	3,296
5 to 10 ..	4,152	2,938	1,072	827	751	384	10,124
11 to 20 ..	2,272	1,794	561	443	303	163	5,536
21 to 50 ..	1,799	1,517	426	347	238	102	4,429
51 to 100 ..	625	559	132	141	90	38	1,585
101 to 200 ..	315	279	102	52	34	12	794
201 to 300 ..	85	90	25	28	11	3	242
301 to 400 ..	49	44	7	10	2	..	112
401 to 500 ..	39	28	2	2	..	2	73
501 to 750 ..	34	30	7	7	..	2	80
751 to 1,000 ..	18	15	2	3	..	2	40
Over 1,000 ..	32	9	3	7	1	2	54
Total ..	15,194	11,642	3,642	2,865	2,788	1,225	37,356

The relative importance of large and small factories is illustrated by a classification of the average number of persons engaged according to the size of factory in which they work:—

FACTORIES : CLASSIFICATION OF PERSONS ENGAGED ACCORDING TO SIZE OF FACTORY, 1947-48.

Size of Factory (Persons engaged).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
AVERAGE NUMBER ENGAGED DURING PERIOD WORKED.							
Under 4 ..	9,166	6,853	1,998	1,563	2,541	877	22,998
4 ..	5,488	4,100	1,492	1,040	556	508	13,184
5 to 10 ..	28,784	20,236	7,490	5,752	5,016	2,566	69,844
11 to 20 ..	33,220	26,440	8,139	6,451	4,455	2,354	81,059
21 to 50 ..	56,440	47,556	13,141	10,775	7,615	3,250	138,777
51 to 100 ..	43,618	39,462	9,595	9,612	6,021	2,773	111,081
101 to 200 ..	42,831	38,523	14,879	7,179	4,597	1,625	109,634
201 to 300 ..	20,854	21,928	6,047	6,559	2,588	850	58,826
301 to 400 ..	16,777	14,751	2,363	3,279	775	..	37,945
401 to 500 ..	17,368	12,466	966	920	..	890	32,610
501 to 750 ..	20,613	17,173	4,357	4,155	..	1,291	47,589
751 to 1,000 ..	15,399	13,137	1,734	2,696	..	1,559	34,525
Over 1,000 ..	56,292	17,335	5,103	13,883	2,468	3,515	98,596
Total ..	366,850	279,960	77,304	73,864	36,632	22,058	856,668
Average per Factory ..	24.14	24.05	21.23	25.78	13.14	18.01	22.93

3. Australia, 1938-39 and 1943-44 to 1947-48.—In the following table factories in Australia during 1938-39 and each of the five years 1943-44 to 1947-48 are classified according to the number of persons engaged, in conformity with the practice prior to 1945-46.

FACTORIES : CLASSIFICATION ACCORDING TO NUMBER OF PERSONS ENGAGED, AUSTRALIA.

Year.	Establishments Employing on the Average—							
	20 and under.		21 to 100.		101 and upwards.		Total.	
	Es- tablish- ments.	Persons en- gaged.	Es- tablish- ments.	Persons en- gaged.	Es- tablish- ments.	Persons en- gaged.	Es- tablish- ments.	Persons en- gaged.
1938-39—								
Number ..	21,982	129,505	4,013	170,971	946	272,022	26,941	572,498
Average per establishment ..	..	5.89	..	42.60	..	287.55	..	21.25
Percentage on total ..	81.59	22.62	14.90	29.86	3.51	47.52	100.00	100.00
1943-44—								
Number ..	22,050	129,239	4,325	182,561	1,299	460,802	27,674	772,602
Average per establishment ..	..	5.86	..	42.21	..	354.74	..	27.92
Percentage on total ..	79.68	16.73	15.63	23.63	4.69	59.64	100.00	100.00
1944-45—								
Number ..	23,059	137,153	4,579	193,359	1,292	427,002	28,930	757,514
Average per establishment ..	..	5.95	..	42.23	..	330.50	..	26.18
Percentage on total ..	79.70	18.11	15.83	25.52	4.47	56.37	100.00	100.00
1945-46—								
Number ..	24,819	154,242	5,080	211,781	1,285	390,538	31,184	756,561
Average per establishment ..	..	6.21	..	41.60	..	303.92	..	24.26
Percentage on total ..	79.59	20.39	16.29	27.99	4.12	51.62	100.00	100.00
1946-47—								
Number ..	27,676	173,371	5,771	239,768	1,321	399,881	34,768	813,020
Average per establishment ..	..	6.26	..	41.55	..	302.77	..	23.38
Percentage on total ..	79.60	21.32	16.60	29.50	3.80	49.18	100.00	100.00
1947-48—								
Number ..	29,947	187,085	6,014	249,858	1,395	419,725	37,356	856,668
Average per establishment ..	..	6.25	..	41.55	..	300.88	..	22.93
Percentage on total ..	80.17	21.84	16.09	29.16	3.74	49.00	100.00	100.00

§ 3. Power Equipment in Factories.

1. **General.**—In 1936-37 statistics of power equipment in factories were collected on a basis different from that previously in use. Information now obtained relates to the "rated horse-power" of engines ordinarily in use and of engines in reserve or idle, omitting obsolete engines. In addition, particulars of the power equipment of Central Electric Stations are collected in greater detail. To avoid duplication it is essential that some distinction should be made between Central Electric Stations and other classes of industries. In the following tables Central Electric Stations have been treated separately from other factories.

In par. 2 below, 1,322 factories are shown as using no power other than hand-power, the distribution of these factories among the various industries being as follows: Line, Plaster and Asphalt, 17; Chemicals, Drugs and Medicines, 17; Galvanized Ironworking, Tinsmithing, 39; Ready-made Tailoring and Clothing, 372; Dressmaking, 117; Millinery, 45; Bakeries, 163; Cabinet and Furniture Making, 40; all other industries, 512.

2. **Rated Horse-power of Engines in Factories other than Central Electric Stations.**—The following table shows the number of factories using steam, gas, oil, electricity, or water power, those using hand-power, and the rated horse-power of engines ordinarily in use and in reserve or idle during 1947-48:—

FACTORIES(a) : RATED HORSE-POWER OF ENGINES, 1947-48.

State.	Number of Establishments.			Rated Horse-power of Engines.	
	Using Power.	Others.	Total.	Ordinarily in use.	In Reserve or Idle (omitting obsolete)
New South Wales ..	14,837	264	15,101	1,095,939	133,155
Victoria ..	11,192	383	11,575	740,046	102,647
Queensland ..	3,392	204	3,596	271,141	31,956
South Australia ..	2,604	220	2,824	205,220	27,262
Western Australia ..	2,463	212	2,675	101,506	10,384
Tasmania ..	1,183	39	1,222	121,715	16,711
Australia..	35,671	1,322	36,993	2,535,567	322,115

(a) Excludes Central Electric Stations.

3. **Rated Horse-power of Engines Ordinarily in Use.**—(i) *According to Type, States.* Particulars of the types of engines ordinarily in use in each State and their rated horse-power are given in the next table:—

FACTORIES(a) : TYPES AND RATED HORSE-POWER OF ENGINES ORDINARILY IN USE, 1947-48.

State.	Rated Horse-power of Engines ordinarily in use.							
	Steam.		Internal Combustion.			Water.	Motors driven by electricity.	
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		Purchased.	Own Generation. (c)
N.S.W. ..	110,974	55,958	2,959	10,363	15,819	424	899,442	71,422
Victoria ..	25,113	32,487	2,831	7,136	10,786	1,150	660,543	26,984
Queensland ..	80,448	15,283	7,174	6,133	16,777	..	145,326	51,880
S. Australia ..	6,843	4,784	1,928	3,029	9,484	10	179,142	20,157
W. Australia ..	8,778	121	2,289	2,056	9,825	..	78,437	7,155
Tasmania ..	2,960	2,013	1	4,939	1,037	246	110,519	..
Australia ..	235,116	110,646	17,182	33,656	63,728	1,830	2,073,409	177,598

(a) Excludes Central Electric Stations.

(b) Excludes particulars in column (c).

(ii) *According to Type, Australia.* In the following table details of the horse-power of the various types of engines in use are given for Australia for the years 1943-44 to 1947-48 compared with 1938-39.

FACTORIES(a) : TYPES AND RATED HORSE-POWER OF ENGINES ORDINARILY IN USE, AUSTRALIA.

Rated Horse-power of Engines ordinarily in use.

Year.	Steam.		Internal Combustion.			Water.	Motors driven by electricity.		Total. (b)
	Reciprocating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		Purchased.	Own Generation. (c)	
1938-39 ..	268,409	84,149	32,914	17,970	55,800	1,616	1,017,911	179,889	1,478,760
1943-44 ..	244,042	121,570	20,318	19,500	50,693	1,621	1,602,261	192,631	2,006,008
1944-45 ..	239,319	118,438	21,280	21,407	57,012	1,581	1,673,348	191,619	2,132,385
1945-46 ..	236,378	117,736	20,481	23,876	56,189	1,737	1,755,036	226,692	2,211,433
1946-47 ..	234,752	110,292	18,522	29,283	58,262	1,904	1,912,921	182,112	2,366,001
1947-48 ..	235,116	110,646	17,182	33,656	63,728	1,830	2,073,405	177,598	2,535,567

(a) Excludes Central Electric Stations.

(b) Excludes particulars in column (c).

(iii) *In Classes of Industry, 1947-48.* The next table shows the rated horse-power of engines ordinarily in use in the various classes of industry in each State during 1947-48.

FACTORIES(a) : RATED HORSE-POWER OF ENGINES ORDINARILY IN USE, 1947-48.

Class of Industry.	N.S.W.	Vic.	Q'land.	S.Aust.	W.Aust.	Tas.	Aust.
I. Treatment of Non-metallic ferous Mine and Quarry Products ..	52,293	39,625	9,399	10,361	5,862	13,542	131,082
II. Bricks, Pottery, Glass, etc. ..	33,951	20,149	4,084	4,855	4,091	1,060	68,190
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	56,342	62,877	4,267	12,908	8,018	796	145,208
IV. Industrial Metals, Machines, Conveyances ..	532,428	199,132	60,508	91,989	26,019	38,099	948,175
V. Precious Metals, Jewellery and Plate ..	3,790	4,261	259	608	259	42	9,219
VI. Textiles and Textile Goods (not Dress) ..	35,257	67,015	3,311	6,624	1,454	5,123	118,784
VII. Skins and Leather (not Cloth- ing or Footwear) ..	15,315	14,569	3,071	3,591	1,666	642	38,854
VIII. Clothing (except Knitted) ..	18,238	18,522	1,980	1,103	1,333	452	42,637
IX. Food, Drink and Tobacco ..	151,655	128,470	124,953	38,752	25,824	11,463	481,117
X. Woodworking and Basket- ware ..	92,044	65,901	45,048	17,732	17,882	17,897	256,504
XI. Furniture of Wood, Bedding, etc. ..	12,769	10,671	5,100	4,384	3,093	1,301	37,318
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	36,256	54,896	5,543	7,241	4,287	30,673	138,896
XIII. Rubber ..	29,838	32,441	1,547	1,265	206	167	65,464
XIV. Musical Instruments ..	1,514	132	16	19	10	..	1,691
XV. Miscellaneous Products ..	12,654	13,333	569	1,228	347	303	28,434
Total, Classes I. to XV. ..	1,084,344	731,997	269,661	203,660	100,351	121,560	2,511,573
XVI. Gas Works ..	11,595	8,049	1,480	1,560	1,155	155	23,994
Grand Total ..	1,095,939	740,046	271,141	205,220	101,506	121,715	2,535,567

(a) Excludes Central Electric Stations.

4. Capacity of Engines and Generators installed in Central Electric Stations.—
 (i) According to Type, Australia. Particulars of the type and the capacity of engines and generators installed in Central Electric Stations in Australia in 1947-48 are given in the following table:—

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, AUSTRALIA, 1947-48.

Particulars.		Capacity of Engines and Generators.						
		Steam.		Internal Combustion.			Water.	Total
		Recipro- cating.	Turbine.	Gas.	Light Oils.	Heavy Oils.		
Engines installed—								
Total installed	Rated H.P.	21,173	2,458,760	21,040	3,985	167,413	375,596	3,047.9
Generators installed—								
Kilowatt capacity—								
Total installed	K.W.	13,936	1,822,523	14,525	3,921	109,472	270,927	2,235,304
Effective capacity	"	13,561	1,610,163	11,299	3,791	99,591	244,480	1,982,885
Maximum load	"	12,493	1,519,895	9,690	2,394	76,730	243,096	1,864,298
Horse-power equivalent—								
Total installed	H.P.	18,683	2,443,183	19,472	5,256	146,753	363,191	2,996,538
Effective capacity	"	18,179	2,158,506	15,147	5,082	133,597	327,737	2,958,158
Maximum load	"	16,748	2,037,495	12,990	3,210	102,860	325,883	2,499,186

(ii) States. Details of the capacity of engines and generators installed in Central Electric Stations in each State in 1947-48 are given in the next table.

CENTRAL ELECTRIC STATIONS : POWER EQUIPMENT, 1947-48.

Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Engines installed	Rated H.P.	1,238,141	800,659	314,321	200,690	150,497	254,350	3,047,967
Generators installed—								
Kilowatt capacity—								
Total installed ..	K.W.	962,688	554,173	216,086	205,661	113,716	182,980	2,235,304
Effective capacity	"	839,612	530,799	162,050	189,812	103,390	157,222	1,982,885
Maximum load ..	"	771,484	518,573	173,626	152,969	91,123	156,523	1,864,298
Horse-power equivalent—								
Total installed ..	H.P.	1,290,531	742,897	289,674	275,699	152,443	245,204	2,996,538
Effective capacity	"	1,125,542	711,563	217,236	254,453	138,000	210,704	2,658,158
Maximum load ..	"	1,034,213	695,173	232,755	205,663	122,155	209,827	2,499,186

§ 4. Employment in Factories.

1. Number Engaged.—(i) General. All persons engaged in the manufacturing activities of a factory, including proprietors who work in their own business and "outworkers" (see par. 4 (ii) hereinafter) are counted as factory employees, while all those are excluded who are engaged in selling and distributing, such as salesmen, travellers, collectors, carters engaged solely on outward delivery of manufactured goods and retailing storemen. Prior to 1945-46 the classification of employment distinguished between (i) working proprietors; (ii) managers and overseers; (iii) accountants and clerks; (iv) engine-drivers and firemen; (v) workers, skilled and unskilled; (vi) carters and messengers; and (vii) others. This grouping, however, did not make adequate provision for measuring the development that has taken place in the employment of chemists and other research workers. As a result, the classification of factory employment was amended in 1945-46 to read as follows:—(i) Working proprietors; (ii) managerial and clerical staff including salaried managers and working directors; (iii) chemists, draftsmen and other laboratory and research staff; (iv) foremen and overseers; (v) skilled and unskilled workers; (vi) carters (excluding delivery only), messengers and persons working regularly at home for factory, mill or workshop.

Prior to the year 1928-29 employment in factories was computed by dividing the sum of the number engaged each week by the number of weeks worked. The figures therefore, represented the average number engaged over the period worked, which, for many factories, was less than a full year. Commencing with the year 1928-29 the figure represents the equivalent average number engaged over a full year of fifty-two weeks. The classification of factories according to the number of persons engaged (*see* § 2 *ante*), however, is still based on the old method, but for all other purposes the average number engaged over the full year is used.

(ii) *Australia*, 1938-39 to 1947-48. Particulars of the number employed, the increase in employment and the rate per cent. of such increase are given for years 1938-39 to 1947-48 in the following table:—

FACTORIES : EMPLOYMENT, AUSTRALIA.

Year.	Males.			Females.			Persons.		
	Number Employed.	Increase on Previous Year.		Number Employed.	Increase on Previous Year.		Number Employed.	Increase on Previous Year.	
		Number.	Per cent.		Number.	Per cent.		Number.	Per cent.
1938-39 ..	412,591	3,989	0.98	152,515	1,957	1.30	565,106	5,946	1.06
1939-40 ..	426,934	14,343	3.48	160,729	8,214	5.39	587,663	22,557	3.99
1940-41 ..	473,058	46,124	10.80	177,015	16,286	10.13	650,073	62,410	10.62
1941-42 ..	524,383	51,325	10.85	200,959	23,944	13.53	725,342	75,269	11.58
1942-43 ..	535,570	11,187	2.13	223,475	22,516	11.20	759,045	33,703	4.65
1943-44 ..	539,141	3,571	0.67	227,365	3,890	1.74	766,506	7,461	0.98
1944-45 ..	535,893	-3,248	-0.60	214,686	-12,679	-5.58	750,579	-15,927	-2.08
1945-46 ..	548,888	12,995	2.42	196,370	-18,316	-8.53	745,258	-5,321	-0.71
1946-47 ..	604,300	55,412	10.10	200,629	4,259	2.17	804,929	59,671	8.01
1947-48 ..	640,925	36,625	6.06	207,951	7,322	3.65	848,876	43,947	5.46

NOTE.—Minus sign (—) indicates decrease.

(iii) *States*, 1938-39 and 1943-44 to 1947-48. The following table shows, for each of the years 1938-39 and 1943-44 to 1947-48 (a) the average number of persons (including both sexes of all ages) engaged in manufacturing industries in each State; (b) for each State, the percentage of the total number engaged in Australia; and (c) the number engaged per ten thousand of the mean population in each State and Australia.

FACTORIES : EMPLOYMENT.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
AVERAGE NUMBER ENGAGED DURING FULL YEAR (52 WEEKS).							
1938-39 ..	228,781	201,831	54,110	43,371	23,211	13,802	565,106
1943-44 ..	323,032	261,331	64,682	69,569	28,101	19,791	766,506
1944-45 ..	314,678	257,637	64,135	65,472	29,146	19,511	750,579
1945-46 ..	310,870	256,249	65,460	63,188	30,256	19,235	745,258
1946-47 ..	343,119	265,757	71,599	70,711	33,806	19,937	804,929
1947-48 ..	363,365	278,271	76,754	73,346	35,967	21,173	848,876
PERCENTAGE ON AUSTRALIAN TOTAL.							
1938-39 ..	40.48	35.72	9.58	7.67	4.11	2.44	100.00
1943-44 ..	42.14	34.09	8.44	9.08	3.67	2.58	100.00
1944-45 ..	41.93	34.33	8.54	8.72	3.88	2.60	100.00
1945-46 ..	41.72	34.38	8.78	8.48	4.06	2.58	100.00
1946-47 ..	42.63	33.01	8.90	8.78	4.20	2.48	100.00
1947-48 ..	42.81	32.78	9.04	8.64	4.24	2.49	100.00

FACTORIES : EMPLOYMENT—continued.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
PER 10,000 OF POPULATION.							
1938-39 ..	836	1,078	537	729	497	581	815
1943-44 ..	1,125	1,319	613	1,129	588	811	1,054
1944-45 ..	1,085	1,289	600	1,051	601	790	1,021
1945-46 ..	1,060	1,272	604	1,002	617	769	1,003
1946-47 ..	1,158	1,303	653	1,104	680	783	1,070
1947-48 ..	1,209	1,345	690	1,124	707	809	1,111

2. Rates of Increase, 1938-39 and 1943-44 to 1947-48.—The percentage increase on the average number of persons engaged in the preceding year is shown below for each State for 1938-39 and 1943-44 to 1947-48.

FACTORIES : ANNUAL PERCENTAGE INCREASE OF PERSONS ENGAGED.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	1.74	0.02	3.82	-1.62	0.34	4.80	1.06
1943-44 ..	2.38	-0.39	0.61	-4.37	8.86	8.09	0.98
1944-45 ..	-2.59	-1.41	-0.85	-5.89	3.72	-1.41	-2.08
1945-46 ..	-1.21	-0.54	2.07	-3.49	3.81	-1.41	-0.71
1946-47 ..	10.37	3.71	9.38	11.91	11.73	3.65	8.01
1947-48 ..	5.90	4.71	7.20	3.73	6.39	6.20	5.46

NOTE.—Minus sign (—) indicates decrease.

3. Persons Engaged in Classes of Industry.—(i) *Australia.* The following table shows the average number of persons engaged in factories under each industrial group in Australia for the years 1938-39 and 1943-44 to 1947-48.

FACTORIES : PERSONS ENGAGED IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	10,343	7,701	7,933	9,929	12,673	14,263
II. Bricks, Pottery, Glass, etc. ..	15,709	9,616	10,459	13,466	16,535	17,536
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	19,816	42,551	36,340	31,471	31,252	31,808
IV. Industrial Metals, Machines, Conveyances ..	177,677	341,030	319,314	292,477	300,921	320,948
V. Precious Metals, Jewellery and Plate ..	3,726	2,373	2,399	3,240	4,021	6,069
VI. Textiles and Textile Goods (not Dress)	46,082	58,539	57,404	55,008	59,810	61,911
VII. Skins and Leather (not Clothing or Footwear) ..	10,767	12,708	12,474	14,492	16,080	15,624
VIII. Clothing (except Knitted) ..	86,092	80,692	86,391	93,370	106,804	111,693
IX. Food, Drink and Tobacco ..	83,846	101,030	105,194	105,878	109,840	113,595
X. Woodworking and Basketware ..	30,739	34,827	35,382	38,346	43,457	47,052
XI. Furniture of Wood, Bedding, etc. ..	15,287	9,563	9,930	13,107	10,579	18,546
XII. Paper, Stationery, Printing, Book-binding, etc. ..	30,913	35,193	36,726	39,905	46,651	47,813
XIII. Rubber ..	7,502	7,961	7,970	8,699	10,173	10,753
XIV. Musical Instruments ..	451	353	392	459	788	887
XV. Miscellaneous Products ..	7,727	12,099	13,018	14,838	17,059	18,235
Total, Classes I. to XV.	555,677	757,436	741,126	734,685	793,633	830,733
XVI. Heat, Light and Power ..	9,429	9,070	9,453	10,573	11,296	12,143
Grand Total ..	565,106	766,506	750,579	745,258	804,929	848,876

Following the outbreak of war in the Pacific in 1941, the transfer of man-power to the more essential industries became apparent, and industries not directly concerned with Australia's war effort showed a marked decline. The industries which declined were those in Class I., Mine and Quarry Products; Class II., Bricks, Pottery, Glass, etc. Class V., Precious Metals; Class VIII., Clothing; Class XI., Furniture; and Class XII.

Paper, etc., while industries where the war-time expansion in employment occurred were those in Class III., Chemicals, etc.; Class IV., Metals, etc.; Class VI., Textiles; Class VII., Skins and Leather; and Class IX., Food.

Following some downward movement from war-time levels of employment which occurred in Class III., Chemicals, etc.; Class IV., Metals, etc.; and Class VI., Textiles in 1945-46, there was a general upward trend in 1946-47, and this continued in respect of each class of industry in 1947-48.

(ii) *States.* Particulars of the numbers engaged in each industrial class are shown in the following table for each State:—

FACTORIES : PERSONS ENGAGED IN INDUSTRIAL CLASSES, 1947-48.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Aust.
I. Treatment of Non-ferrous Mine and Quarry Products ..	5,956	4,263	1,423	1,071	1,007	543	14,263
II. Bricks, Pottery, Glass, etc. ..	9,845	4,124	952	1,577	851	187	17,536
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	14,914	11,030	1,141	3,008	1,540	175	31,808
IV. Industrial Metals, Machines, Conveyances ..	153,367	89,771	24,162	35,165	12,422	6,061	320,948
V. Precious Metals, Jewellery and Plate ..	2,183	3,029	257	359	214	27	6,069
VI. Textiles and Textile Goods (not Dress) ..	21,759	32,745	1,461	2,579	605	2,762	61,911
VII. Skins and Leather (not Clothing or Footwear) ..	6,374	5,518	1,329	1,485	640	278	15,624
VIII. Clothing (except Knitted) ..	46,747	44,506	7,825	7,165	4,511	939	111,693
IX. Food, Drink and Tobacco ..	37,541	35,708	20,091	10,235	5,769	4,251	113,595
X. Woodworking and Basketware ..	17,030	11,826	8,772	3,147	3,552	2,725	47,052
XI. Furniture of Wood, Bedding, etc. ..	7,098	5,077	2,620	1,815	1,305	631	18,546
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	20,979	15,674	4,119	3,010	1,969	2,062	47,813
XIII. Rubber ..	5,037	4,242	793	483	106	92	10,753
XIV. Musical Instruments ..	657	123	32	51	24	..	887
XV. Miscellaneous Products ..	8,904	7,320	584	756	412	259	18,235
Total, Classes I. to XV.	358,391	274,956	75,561	71,906	34,927	20,992	836,733
XVI. Heat, Light and Power ..	4,974	3,315	1,193	1,440	1,040	181	12,143
Grand Total ..	363,365	278,271	76,754	73,346	35,967	21,173	848,876

4. *Persons Engaged According to Occupational Status.*—(i) *General.* In the following table the average number of persons engaged in each State during 1947-48 are classified according to their occupational status. As mentioned previously, persons employed in factories are now classified on a basis different from that adopted prior to 1945-46. The nature of this change is indicated in § 4 (i).

PERSONS ENGAGED : OCCUPATIONAL STATUS, 1947-48.

State.	Average Number of Persons Engaged.						Total.
	Working Pro- priators.	Manager- ial and Clerical Staff, etc.(a)	Chemists, Drafts- men, etc.	Foremen and Overseers.	Workers in Factory (Skilled and Un- skilled).	Carters (excluding Delivery only) and Messen- gers, etc. (b)	
New South Wales ..	12,283	35,939	4,269	13,753	294,699	2,422	363,365
Victoria ..	9,774	26,753	3,120	10,972	225,515	2,137	278,271
Queensland ..	3,022	6,821	552	2,460	63,241	658	76,754
South Australia ..	2,015	7,492	893	2,734	59,843	369	73,346
Western Australia ..	2,021	2,618	237	1,216	29,736	139	35,967
Tasmania ..	828	1,878	258	816	17,249	144	21,173
Australia ..	29,943	81,501	9,329	31,951	690,283	5,869	848,876

(a) Includes salaried managers and working directors.
at home.

(b) Includes persons working regularly

(ii) *Outworkers.* The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and technically embraces only those to whom work is given out by factory owners to be done in the employees' own homes. Details of the numbers of outworkers employed for years up to 1944-45 were shown on page 1048 of Official Year Book No. 37 and in earlier issues. Owing to the altered classification of employment adopted in 1945-46, persons working regularly at home for factories are now included with carters and messengers and separate details of the numbers of homeworkers are no longer available.

5. *Monthly Employment, 1938-39 and 1944-45 to 1948-49.*—The number of persons employed in factories (excluding working proprietors) on the pay-day nearest to the 15th of each month is shown in the following table for the years 1938-39 and 1944-45 to 1948-49.

FACTORIES : MONTHLY EMPLOYMENT, AUSTRALIA.

Month.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49. (a)
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MALES.

July	..	387,693	518,841	518,734	571,662	602,188	624,926
August	..	389,979	518,672	519,122	579,354	606,142	625,294
September	..	391,576	517,013	511,909	583,281	608,934	625,316
October	..	393,977	516,152	505,753	584,007	608,651	624,833
November	..	395,192	515,695	503,296	575,255	608,531	627,069
December	..	394,438	515,384	489,040	564,055	608,135	624,764
January	..	385,742	512,269	513,396	565,550	608,046	627,716
February	..	392,056	513,880	533,761	574,034	609,111	630,145
March	..	395,146	515,455	543,347	578,469	610,476	633,858
April	..	391,005	514,414	547,253	580,792	619,963	633,050
May	..	393,609	513,232	553,980	589,070	622,665	635,979
June	..	390,973	514,501	558,428	593,202	625,019	623,319
Mean	..	391,780	515,459	524,835	578,228	611,488	628,022

FEMALES.

July	..	147,282	217,633	204,705	193,337	200,857	208,827
August	..	149,294	216,491	204,150	195,225	201,697	209,626
September	..	151,159	215,491	199,331	196,271	203,009	211,801
October	..	152,473	213,686	193,587	197,480	204,329	212,861
November	..	152,806	212,604	191,689	197,874	204,931	213,799
December	..	151,165	211,507	183,899	196,748	203,568	212,345
January	..	141,853	207,464	184,810	193,565	200,980	209,107
February	..	151,883	210,401	188,632	198,264	205,741	213,311
March	..	154,854	212,206	192,699	200,737	208,250	215,600
April	..	152,614	209,147	192,084	199,467	208,488	215,239
May	..	150,693	207,556	192,215	199,341	207,385	215,033
June	..	148,601	206,335	192,137	199,893	208,041	210,337
Mean	..	150,390	211,710	193,328	197,350	204,773	212,374

(a) Preliminary estimates.

FACTORIES: MONTHLY EMPLOYMENT, AUSTRALIA—*continued.*

Month.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49. (a)
PERSONS.						
July	534,975	736,474	723,139	764,999	803,045	833,753
August	539,273	735,163	723,272	774,579	807,839	834,920
September	542,735	732,504	711,240	779,552	811,943	837,117
October	546,450	729,838	699,340	781,487	812,980	837,694
November	547,998	728,299	694,985	773,129	813,462	840,868
December	545,603	726,891	672,939	760,803	811,703	837,109
January	527,595	719,733	698,206	759,115	809,026	836,823
February	543,939	724,281	722,393	772,298	814,852	843,456
March	550,000	727,661	736,046	779,206	818,726	849,458
April	543,619	723,561	739,337	780,259	828,451	848,289
May	544,302	720,788	746,195	788,411	830,050	851,612
June	539,574	720,836	750,565	793,095	833,060	833,656
Mean	542,170	727,169	718,163	775,578	816,261	840,396

(a) Preliminary estimates.

6. Distribution of Employees According to Age.—(i) *States.* The extension of statistics of employment in factories, decided upon at the Conference of Australian Statisticians held in 1945, permits of a distribution of employees (excluding working proprietors) into seven age-groups from 1945-46 onwards, instead of three as in previous years. The particulars are collected as at June. The numbers employed in each age-group in June, 1948, are given below:—

FACTORIES: DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE, JUNE, 1948.
(Excluding Working Proprietors.)

Age Groups.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
Under 16 years ..	2,125	2,743	1,265	732	704	165	7,734
16 years	4,702	3,220	1,440	871	802	299	11,334
17 "	6,037	3,684	1,687	1,060	888	393	13,749
18 "	6,555	3,983	1,736	1,139	872	460	14,745
19 "	6,493	3,943	1,607	1,167	759	435	14,404
20 "	6,392	4,021	1,650	1,255	812	456	14,586
21 " and over ..	232,867	171,096	54,426	51,817	23,590	14,671	548,467
Total	265,171	192,690	63,811	58,041	28,427	16,879	625,019
FEMALES.							
Under 16 years ..	1,831	2,564	955	722	357	120	6,549
16 years	3,696	2,940	876	673	532	195	8,912
17 "	4,729	3,374	961	734	681	286	10,765
18 "	5,292	3,666	959	816	615	297	11,645
19 "	5,012	3,418	902	743	472	290	10,837
20 "	4,599	3,229	785	726	451	252	10,042
21 " and over ..	65,074	59,915	7,968	10,062	3,410	2,862	149,291
Total	90,233	79,106	13,406	14,476	6,518	4,302	208,041
PERSONS.							
Under 16 years ..	3,956	5,307	2,220	1,454	1,061	285	14,283
16 years	8,398	6,160	2,316	1,544	1,334	494	20,246
17 "	10,766	7,058	2,648	1,794	1,569	679	24,514
18 "	11,847	7,649	2,695	1,955	1,487	757	26,390
19 "	11,505	7,361	2,509	1,910	1,231	725	25,241
20 "	10,991	7,250	2,435	1,981	1,263	708	24,628
21 " and over ..	297,941	231,011	62,394	61,879	27,000	17,533	697,758
Total	355,404	271,796	77,217	72,517	34,945	21,181	833,060

(ii) *Australia.* As comparative details based on the new age grouping are not available for the years prior to 1945-46, the following table shows the age distribution in sexes for Australia in June, 1939 and 1944 to 1948 on the old basis.

FACTORIES : DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE, AUSTRALIA
(Excluding Working Proprietors.)

In June—	Under 16 Years.		16 and under 21 Years.		Adults.		Total.	
	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.	No.	Per Cent.
MALES.								
1939 ..	16,109	4.12	76,418	19.55	298,446	76.33	390,973	100
1944 ..	13,114	2.53	64,990	12.54	440,072	84.93	518,176	100
1945 ..	11,706	2.28	66,875	13.00	435,920	84.72	514,501	100
1946 ..	9,016	1.61	69,413	12.43	479,999	85.96	558,428	100
1947 ..	7,998	1.35	71,194	12.00	514,010	86.65	593,202	100
1948 ..	7,734	1.24	68,818	11.01	548,467	87.75	625,019	100
FEMALES.								
1939 ..	15,497	10.43	56,273	37.87	76,831	51.70	148,601	100
1944 ..	9,445	4.34	60,844	27.98	147,141	67.68	217,430	100
1945 ..	9,178	4.45	56,158	27.22	140,999	68.33	206,335	100
1946 ..	7,881	4.10	53,018	27.59	131,238	68.31	192,137	100
1947 ..	7,401	3.70	52,805	26.42	139,687	66.88	199,893	100
1948 ..	6,549	3.15	52,201	25.09	149,291	71.76	208,041	100
PERSONS.								
1939 ..	31,606	5.86	132,691	24.59	375,277	69.55	539,574	100
1944 ..	22,559	3.07	125,834	17.11	587,213	79.82	735,606	100
1945 ..	20,884	2.90	123,033	17.07	576,919	80.03	720,836	100
1946 ..	16,897	2.25	122,431	16.31	611,237	81.44	750,565	100
1947 ..	15,399	1.94	123,999	15.64	653,697	82.42	793,095	100
1948 ..	14,283	1.71	121,019	14.53	697,758	83.76	833,060	100

§ 5. Sex Distribution in Factories.

1. *Distribution According to Sex of Persons Engaged.*—(i) *General.* In New South Wales the ratio of the number of females engaged in factories to the number of males during 1886 was about one to seven; in 1891 one to six; in 1903 it became about one to four; and in 1947-48 was one to three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one to three, and in 1947-48 was about one to two. In the remaining States the ratio in 1947-48 was roughly one female engaged to every four males. For Australia as a whole the ratio of females employed in factories was highest in 1943-44 at about two females to five males but by 1947-48 the ratio had declined to the level of one female to three males.

(ii) *Average Number of Males and Females Engaged.* The following table shows the average number of males and females engaged in factories in each State for 1938-39 and the five years 1943-44 to 1947-48:—

FACTORIES : MALES AND FEMALES ENGAGED.

State.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
MALES.						
New South Wales ..	167,172	226,824	223,770	227,454	255,733	272,600
Victoria ..	136,218	175,078	174,424	178,951	188,753	199,003
Queensland ..	43,941	50,822	51,483	53,587	59,309	63,526
South Australia ..	35,406	50,660	49,056	49,523	56,739	59,071
Western Australia ..	18,704	21,060	22,404	24,268	27,575	29,517
Tasmania ..	11,150	14,697	14,756	15,105	16,186	17,208
Australia ..	412,591	539,141	535,893	548,888	604,300	640,925
FEMALES.						
New South Wales ..	61,609	96,208	90,908	83,416	87,386	90,765
Victoria ..	65,613	86,253	83,213	77,298	76,999	79,268
Queensland ..	10,169	13,860	12,652	11,873	12,290	13,228
South Australia ..	7,965	18,909	16,416	13,665	13,972	14,275
Western Australia ..	4,507	7,041	6,742	5,988	6,231	6,450
Tasmania ..	2,652	5,094	4,755	4,130	3,751	3,965
Australia ..	152,515	227,365	214,686	196,370	200,629	207,951

2. **Rate of Variation for each Sex.**—The percentages of increase or decrease on the average numbers of males and females engaged in the preceding year are shown below for the years 1938-39 and 1943-44 to 1947-48 :—

ANNUAL PERCENTAGE INCREASES OF MALES AND FEMALES ENGAGED.

State.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
MALES.						
New South Wales ..	1.69	1.42	-1.35	1.65	12.43	6.60
Victoria ..	0.04	-0.15	-0.37	2.60	5.48	5.43
Queensland..	3.79	1.11	1.30	4.09	10.68	7.11
South Australia ..	-2.39	-4.04	-3.17	0.95	14.57	4.11
Western Australia ..	-0.30	8.00	6.38	8.32	13.63	7.04
Tasmania ..	4.40	5.42	0.40	2.37	7.16	6.31
Total ..	0.98	0.67	-0.60	2.42	10.10	6.06
FEMALES.						
New South Wales ..	1.88	4.74	-5.51	-8.24	4.76	3.87
Victoria ..	-0.03	-0.88	-3.52	-7.11	-0.39	2.95
Queensland..	3.96	-0.77	-8.72	-6.16	3.51	7.63
South Australia ..	1.98	-5.24	-13.18	-16.76	2.25	2.17
Western Australia ..	3.06	11.55	-4.25	-11.18	4.06	3.51
Tasmania ..	6.51	16.59	-6.65	-13.14	-9.18	5.71
Total ..	1.30	1.74	-5.58	-8.53	2.17	3.65

NOTE.—The minus sign (—) indicates decrease.

3. **Masculinity of Persons Engaged in Factories.**—The extent to which females are engaged in the factories of Australia may perhaps be more clearly shown by giving the masculinity of persons engaged in each State. The following table shows particulars for the years 1938-39 and 1943-44 to 1947-48 :—

FACTORIES : MASCULINITY(a) OF PERSONS ENGAGED.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1938-39 ..	271	208	432	445	415	420	271
1943-44 ..	236	203	367	268	299	289	237
1944-45 ..	246	210	407	299	332	310	250
1945-46 ..	273	232	451	362	405	366	280
1946-47 ..	293	245	483	406	443	432	301
1947-48 ..	300	251	480	414	458	434	308

(a) Number of males per 100 females.

For a number of years prior to 1926-27 there were on the average 300 males engaged in factories for every 100 females, but in that year the proportion of males began to fall with the increasing activity in the clothing and textile industries, in which the number of females to males is relatively high. As these trades were not so seriously affected by the depression as the heavier industries, the proportion of males continued to fall, until in 1932-33 there were only 239 males engaged to every 100 females. With the recovery of employment in the heavier industries subsequent to that year, the proportion of males per 100 females had increased to 271 in 1937-38 and 1938-39.

The decrease in masculinity from 1938-39 to 1943-44 resulted from the enlistment of men in the armed services and the expansion of industry caused by the war. In many industries the younger men were released for service in the defence forces and large numbers of women were absorbed as an adjustment to the industrial effort of Australia. Following the cessation of hostilities in 1945 and the return of servicemen to civilian life, the number of females employed in factories declined and masculinity increased. In 1947-48 there were 308 males per 100 females employed in factories, compared with 271 in 1938-39.

4. **Employment of Females in Particular Industries.**—(i) *General.* The greater number of females in manufacturing industries are engaged in four classes, namely:—IV., Industrial Metals, Machines, etc.; VI., Textiles; VIII., Clothing; and IX., Food, Drink and Tobacco. In 1947-48 these industries accounted for 86.16 per cent. of all females in factories. In two classes only did the number of females exceed the number of males, namely, in Class VI., Textiles, where there were 109 females to every 100 males and in Class VIII., Clothing, with 245 females per 100 males. The following tables show the average number of males and females engaged in each of these classes in 1947-48:—

MALES AND FEMALES ENGAGED IN PARTICULAR INDUSTRIES, 1947-48.

Class.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
MALES.							
IV. Industrial Metals, etc.	139,250	81,047	23,037	32,129	11,881	5,812	293,156
VI. Textiles and Textile Goods (not Dress)	10,075	15,629	790	1,355	305	1,412	29,566
VIII. Clothing (except Knitted)	13,163	13,524	1,962	2,045	1,293	366	32,353
IX. Food, Drink and Tobacco	25,915	26,169	17,293	7,876	4,504	3,066	84,823
All Other Classes	84,197	62,634	20,444	15,666	11,534	6,552	201,027
Total	272,600	199,003	63,526	59,071	20,517	17,208	640,925
FEMALES.							
IV. Industrial Metals, etc.	14,117	8,724	1,125	3,036	541	249	27,792
VI. Textiles and Textile Goods (not Dress)	11,684	17,116	671	1,224	300	1,350	32,345
VIII. Clothing (except knitted)	33,584	30,982	5,863	5,120	3,218	573	79,340
IX. Food, Drink and Tobacco	11,020	9,539	2,730	2,359	1,205	1,185	28,772
All Other Classes	19,754	12,907	2,771	2,539	1,120	608	39,702
Total	90,765	79,268	13,228	14,275	6,450	3,965	207,951

(ii) *Females Engaged in Clothing Trade.* The employment of females in the several industries of Class VIII., Clothing—in which class the largest number of females is employed—and the relation of their number to that of the males so engaged are shown in the following table:—

FEMALES ENGAGED IN CLOTHING INDUSTRIES, 1947-48.

Industry.	New South Wales.			Victoria.			Other States.		
	Males.	Females.	Femininity. (a)	Males.	Females.	Femininity. (a)	Males.	Females.	Femininity. (a)
Tailoring and Ready-made Clothing	3,298	15,723	477	2,588	6,326	244	1,747	5,693	326
Waterproof and Oil-skin Clothing	61	252	413	98	306	312	12	82	683
Dressmaking, Hem-stitching	130	2,179	1,676	1,171	10,116	864	184	3,618	1,966
Millinery	192	1,282	668	243	1,073	442	50	655	1,310
Shirts, Collars and Underclothing	634	4,858	766	520	3,946	759	164	1,758	1,072
Foundation Garments	113	1,276	1,129	167	975	584	25	188	752
Handkerchiefs, Ties and Scarves	146	811	555	73	409	560	4	13	325
Hats and Caps	668	645	97	461	257	56	28	129	461
Gloves	115	393	342	135	498	369	29	122	421
Boots and Shoes	3,763	3,863	103	5,629	5,410	96	1,986	1,579	80
Boot and Shoe Repairing	1,497	90	6	763	26	3	643	30	5
Boot and Shoe Accessories	271	233	86	116	178	153	23	1	4
Umbrellas and Walking Sticks	33	66	200	16	47	294	10	23	230
Dyeworks and Cleaning (including Renovating and Repairing)	2,220	1,793	81	1,491	1,197	80	761	869	114
Other	22	120	545	53	218	411	..	14	(b)
Total	13,163	33,584	255	13,524	30,982	229	5,666	14,774	261

(a) Number of females per 100 males.

(b) Not applicable.

§ 6. Child Labour in Factories.

1. **Conditions of Child Labour.**—The employment of young persons in factories in the States is regulated by Acts of Parliament, as is the case with the employment of female labour. The object of the restrictions imposed is to ensure, amongst other things, that a proper period shall be devoted to primary education, and that the early years of labour shall not exhaust the worker before the attainment of full growth.

2. **Number of Children Engaged, 1939 and 1944 to 1948.**—In the returns for the various States, the term "child" denotes any person under sixteen years of age. The decline in the number of children employed from the peak of 33,553 reached in June, 1940 to 14,283 in June, 1948, which is most marked in all States excepting Western Australia, was probably caused by several factors, including (i) the raising of the school leaving age in New South Wales and Tasmania, (ii) fewer children available for employment owing to the decline in the birth rate which occurred about 1929, and (iii) the high level of employment which enabled parents to keep their children at school beyond the statutory leaving age.

The following table shows the number of children of each sex employed in manufacturing industries in June of the years 1939 and 1944 to 1948.

FACTORIES : CHILDREN ENGAGED, JUNE.

State.	1939.	1944.	1945.	1946.	1947.	1948.
MALES.						
New South Wales ..	5,759	3,881	3,287	2,451	2,186	2,125
Victoria ..	6,167	5,031	4,607	3,449	2,929	2,743
Queensland ..	1,790	1,732	1,567	1,237	1,236	1,265
South Australia ..	1,296	1,232	1,066	829	788	732
Western Australia ..	705	753	763	739	673	704
Tasmania ..	392	485	416	311	186	165
Australia ..	16,109	13,114	11,706	9,016	7,998	7,734
FEMALES.						
New South Wales ..	7,084	3,014	2,870	2,265	2,094	1,831
Victoria ..	5,005	3,731	3,609	3,007	2,810	2,564
Queensland ..	1,334	1,017	992	1,020	998	955
South Australia ..	1,053	1,020	1,017	885	884	722
Western Australia ..	521	356	338	478	454	357
Tasmania ..	500	307	352	226	161	120
Australia ..	15,497	9,445	9,178	7,881	7,401	6,549
TOTAL.						
New South Wales ..	12,843	6,895	6,157	4,716	4,280	3,956
Victoria ..	11,172	8,762	8,216	6,456	5,739	5,307
Queensland ..	3,124	2,749	2,559	2,257	2,234	2,220
South Australia ..	2,349	2,252	2,083	1,714	1,672	1,454
Western Australia ..	1,226	1,109	1,101	1,217	1,127	1,061
Tasmania ..	892	792	768	537	347	285
Australia ..	31,606	22,559	20,884	16,897	15,399	14,283

3. **Percentage of Children on Total Number of Persons Engaged.**—The following table shows the percentage of children on the total number of persons engaged in the various states in June of each of the six years 1939 and 1944 to 1948. In 1948 the percentage was highest in Western Australia and lowest in New South Wales.

PERCENTAGE OF CHILDREN ON TOTAL NUMBER OF PERSONS ENGAGED.
(Excluding Working Proprietors.)

State.	June—					
	1939.	1944.	1945.	1946.	1947.	1948.
New South Wales ..	5.85	2.23	2.04	1.48	1.26	1.11
Victoria.. ..	5.81	3.51	3.32	2.53	2.20	1.95
Queensland ..	6.01	4.31	4.14	3.63	3.14	2.88
South Australia ..	5.78	3.42	3.33	2.64	2.41	2.01
Western Australia ..	5.61	4.03	3.84	3.99	3.40	3.04
Tasmania ..	6.78	4.07	4.09	2.77	1.75	1.35
Australia ..	5.86	3.07	2.90	2.25	1.94	1.71

4. Industries Employing Child Labour.—The distribution of children employed in factories in June, 1948, and the percentage on the total number employed are given in the following table according to the class of industry:—

FACTORIES : CHILDREN EMPLOYED, BY CLASSES, JUNE, 1948.

Class of Industry.	Children Employed.		Total Number Employed.(a)		Percentage of Children on Total. Number Employed. (a)	
	Males.	Females.	Males.	Females.	Males.	Females.
I. Treatment of Non-metalliferous Mine and Quarry Products..	99	8	13,425	461	0.74	1.74
II. Bricks, Pottery, Glass, etc ..	119	23	16,489	1,212	0.72	1.90
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	147	164	24,367	7,845	0.60	2.09
IV. Industrial Metals, Machines, Conveyances ..	3,254	561	289,062	28,556	1.13	1.06
V. Precious Metals, Jewellery and Plate ..	108	27	4,625	903	2.34	2.99
VI. Textiles and Textile Goods (not Dress) ..	638	1,115	29,830	32,700	2.14	3.41
VII. Skins and Leather (not Clothing or Footwear) ..	117	82	11,687	3,458	1.00	2.37
VIII. Clothing (except Knitted) ..	503	3,292	28,191	79,531	2.00	4.14
IX. Food, Drink and Tobacco ..	891	569	82,438	27,538	1.08	2.07
X. Woodworking and Basketware ..	466	35	42,296	1,821	1.10	1.92
XI. Furniture of Wood, Bedding, etc.	512	56	14,933	2,623	3.43	2.21
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	542	402	34,116	12,924	1.59	3.11
XIII. Rubber ..	74	39	8,964	2,269	0.83	1.72
XIV. Musical Instruments ..	14	4	734	146	1.91	2.74
XV. Miscellaneous Products ..	163	169	11,520	5,962	1.41	2.83
Total, Classes I. to XV.	7,707	6,548	612,677	207,949	1.26	3.15
XVI. Heat, Light and Power.. ..	27	1	12,342	92	0.22	1.09
Grand Total ..	7,734	6,549	625,019	208,041	1.24	3.15

(a) Excludes working proprietors.

5. Apprenticeship.—In all the States, acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

§ 7. Salaries and Wages Paid and Value of Production.

NOTE.—In all tables relating to salaries and wages paid in factories the amounts drawn by working proprietors are excluded.

1. *General.*—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1947-48 was £1,210,119,397, of which amount £83,729,030 represented the value of the materials used, including containers, etc., tools replaced and repairs to plant and buildings, and £37,093,719 the value of the power, fuel and light used. The difference between the sum of the last two amounts and the value of the output, namely £489,296,648, represents the value of production as defined by the Conference of Statisticians at Sydney in 1925, i.e. "the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production." The total amount of salaries and wages paid in factories in 1947-48 was £285,765,264. This figure, which excludes amounts drawn by working proprietors, was the highest ever recorded and shows an increase of £48,591,498 or 20.49 per cent. on that for the previous year.

2. *Salaries and Wages Paid.*—(i) *In Classes of Industry, 1947-48.* The amounts of salaries and wages paid in the various classes of industry in each State are shown in the following table:—

FACTORIES : SALARIES AND WAGES PAID, 1947-48.

(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
I. Treatment of Non-metaliferous Mine and Quarry Products	2,326,204	1,522,682	498,254	377,818	322,508	180,405	5,227,871
II. Bricks, Pottery, Glass, etc.	3,589,325	1,441,108	305,788	554,939	259,989	61,810	6,212,959
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	5,504,866	4,205,483	386,315	1,071,828	553,488	57,933	11,779,913
IV. Industrial Metals, Machines, Conveyances	58,278,851	33,572,220	7,844,775	13,192,744	3,945,708	2,256,180	119,090,478
V. Precious Metals, Jewellery and Plate	667,814	1,034,775	60,013	99,404	57,832	5,794	1,925,632
VI. Textiles and Textile Goods (not Dress)	6,431,759	9,800,202	370,162	819,503	154,550	808,386	18,384,622
VII. Skins and Leather (not Clothing or Footwear)	2,215,483	2,004,176	445,632	560,703	211,595	113,062	5,550,651
VIII. Clothing (except Knitted)	11,406,555	11,519,717	1,665,166	1,541,169	864,010	213,166	27,209,883
IX. Food, Drink and Tobacco	12,349,696	12,116,072	7,089,927	3,243,842	1,802,779	1,326,380	37,928,696
X. Woodworking and Basketware	5,482,517	3,835,538	2,575,473	986,024	1,057,840	777,028	14,714,420
XI. Furniture of Wood, Bedding, etc.	2,230,181	1,524,954	735,284	510,172	327,718	150,900	5,479,209
XII. Paper, Stationery, Printing, Book-binding, etc.	7,497,062	5,579,463	1,274,894	967,928	625,943	743,776	16,689,066
XIII. Rubber	2,025,132	1,737,575	249,553	145,332	27,686	24,571	4,209,849
XIV. Musical Instruments	225,507	38,782	9,092	15,044	5,999	..	294,484
XV. Miscellaneous Products	2,726,124	2,324,419	146,112	193,530	89,171	71,107	5,550,463
Total, Classes I. to XV.	122,957,136	92,257,166	23,656,540	24,280,040	10,306,816	6,780,548	280,247,296
XVI. Heat, Light and Power	2,388,742	1,545,022	506,676	572,958	428,831	75,739	5,517,968
Grand Total	125,345,878	93,802,188	24,163,216	24,852,998	10,735,647	6,856,337	285,765,264

(ii) *Totals and Averages, 1938-39 and 1943-44 to 1947-48.* The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for each of the years indicated. The average wage paid is not comparable with that shown in similar tables in issues of the Official Year Book prior

to No. 23, 1930, on account of the change in the method of computing the average number of hands employed, as explained earlier. The figures exclude working proprietors and the amounts drawn by them:—

FACTORIES : TOTAL AND AVERAGE SALARIES AND WAGES PAID.
(£.)

Year.	Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
1938-39	Total amount paid..	44,606,497	36,026,542	10,887,229	8,169,350	4,573,558	2,479,886	106,743,002
	Average per employee	201.77	185.64	210.78	195.57	207.90	188.31	196.31
1943-44	Total amount paid..	93,518,326	73,961,193	18,071,689	18,711,413	7,417,595	5,193,603	216,873,819
	Average per employee	297.45	291.85	288.27	275.00	273.44	270.85	291.16
1944-45	Total amount paid..	89,243,041	70,560,011	17,979,827	17,246,148	7,614,243	5,008,530	207,651,800
	Average per employee	291.93	282.90	289.91	269.53	271.20	265.32	285.21
1945-46	Total amount paid..	87,647,460	70,499,214	18,011,966	16,769,766	7,883,814	5,006,511	205,818,733
	Average per employee	290.75	284.09	285.00	272.71	273.01	269.85	285.17
1946-47	Total amount paid..	103,587,559	77,993,765	20,310,541	20,538,958	9,105,010	5,637,933	237,173,766
	Average per employee	312.12	303.82	295.51	298.72	284.35	294.39	305.12
1947-48	Total amount paid..	125,345,878	93,802,188	24,163,216	24,852,998	10,735,647	6,865,337	285,765,264
	Average per employee	357.03	349.36	327.72	318.42	316.26	337.45	348.95

In comparing the figures in the preceding table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, there is a large number of hands employed in Class VIII., Clothing, comprising a relatively high percentage of women and children. The highest average wages per employee in 1947-48 were paid in New South Wales, Victoria and South Australia in that order.

The average earnings per employee rose annually from 1938-39 to 1943-44 when a record high level of £291 was attained as a result of war-time conditions. In 1944-45 the average dropped to £285 and remained at this level in 1945-46. In 1946-47 average earnings rose again, and in 1947-48 reached a new record level of almost £349.

(iii) *Earnings of Males and Females, 1947-48.* The following table shows the approximate amount of salaries and wages paid to males and females in each class of industry in each State during the year 1947-48:—

SALARIES AND WAGES : MALE AND FEMALE FACTORY EMPLOYEES, 1947-48.
(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES.							
I. Treatment of Non-metaliferous Mine and Quarry Products ..	2,272,105	1,490,845	490,653	369,760	317,287	177,404	5,118,054
II. Bricks, Pottery, Glass etc. ..	3,461,527	1,360,080	301,109	536,347	253,055	60,998	5,973,116
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	4,572,114	3,634,446	337,671	972,071	523,652	52,654	10,092,606
IV. Industrial Metals, Machines, Conveyances ..	55,147,749	31,517,807	7,624,552	12,529,961	3,849,360	2,209,430	112,878,859
V. Precious Metals, Jewellery and Plate ..	592,673	939,266	54,171	94,897	56,074	5,664	1,743,045
VI. Textiles and Textile Goods (not Dress) ..	3,861,368	6,084,067	243,933	513,599	99,704	519,259	11,321,930
VII. Skins and Leather (not Clothing or Footwear) ..	1,803,084	1,775,123	414,167	510,052	192,762	110,274	4,805,402
VIII. Clothing (except Knitted) ..	4,421,490	4,696,446	572,068	597,667	311,844	108,720	10,708,241
IX. Food, Drink and Tobacco ..	9,807,083	10,004,683	6,540,714	2,800,772	1,588,257	1,079,390	31,820,899
X. Woodworking and Basketware ..	5,333,589	3,740,917	2,506,656	953,229	1,051,604	766,764	14,352,759
XI. Furniture of Wood, Bedding, etc. ..	1,961,050	1,386,014	695,835	461,767	306,599	144,244	4,955,509
XII. Paper, Stationery, Printing, Book-binding, etc. ..	6,236,262	4,769,921	1,056,378	820,340	545,712	676,552	14,105,165
XIII. Rubber ..	1,823,343	1,540,302	191,476	130,864	20,461	23,283	3,735,729
XIV. Musical Instruments ..	199,959	37,993	9,092	14,851	5,999	..	264,894
XV. Miscellaneous Products ..	2,158,175	1,795,066	114,232	157,558	73,770	59,522	4,358,323
Total, Classes I. to XV ..	103,648,571	77,221,171	21,153,007	21,463,753	9,202,140	3,994,116	230,233,591
XVI. Heat, Light and Power ..	2,379,252	1,539,240	505,832	571,484	427,201	74,249	5,497,258
Grand Total ..	106,027,823	78,760,411	21,658,839	22,035,219	9,629,341	4,068,411	241,731,849

SALARIES AND WAGES: MALE AND FEMALE FACTORY EMPLOYEES.
1947-48—continued.
(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
FEMALES.							
I. Treatment of Non-metalliferous Mine and Quarry Products ..	54,099	31,837	7,601	8,058	5,221	3,001	109,817
II. Bricks, Pottery, Glass, etc. ..	127,798	81,028	4,679	18,592	6,934	812	239,843
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	932,752	571,037	48,644	99,757	29,836	4,381	1,686,407
IV. Industrial Metals, Machines, Conveyances ..	3,131,102	2,054,413	220,223	662,783	96,348	46,750	6,211,619
V. Precious Metals, Jewellery and Plate ..	75,141	95,509	5,542	4,507	1,758	130	182,587
VI. Textiles and Textile Goods (not Dress) ..	2,570,391	3,716,135	126,229	305,964	54,846	289,127	7,062,692
VII. Skins and Leather (not Clothing or Footwear) ..	412,399	229,053	31,465	50,651	18,833	2,788	745,189
VIII. Clothing (except Knitted) ..	6,985,065	6,823,271	1,093,198	943,502	552,166	104,440	16,501,642
IX. Food, Drink and Tobacco ..	2,542,613	2,111,389	549,213	443,070	214,522	246,990	6,107,797
X. Woodworking and Basketware ..	148,928	94,621	68,817	32,795	6,236	10,264	361,661
XI. Furniture of Wood, Bedding, etc. ..	269,131	138,940	39,449	48,405	21,119	6,656	523,700
XII. Paper, Stationery, Printing, Book-binding, etc. ..	1,260,800	809,542	218,516	147,588	80,231	67,224	2,583,901
XIII. Rubber ..	201,789	197,273	58,077	14,468	1,225	1,288	474,120
XIV. Musical Instruments ..	28,608	789	..	193	..	..	29,590
XV. Miscellaneous Products ..	567,949	529,353	31,880	35,972	15,401	11,585	1,192,140
Total, Classes I. to XV.	19,308,555	17,111,000	2,504,377	2,817,779	1,106,306	796,926	44,033,415
XVI. Heat, Light and Power ..	9,490	5,782	844	1,474	1,630	1,490	20,710
Total ..	19,318,055	17,489,972	2,504,377	2,817,779	1,106,306	796,926	44,033,415

(iv) *Total and Average Earnings of Males and Females, 1938-39 and 1943-44 to 1947-48.* Particulars for these years are given in the table hereunder:—

TOTAL AND AVERAGE SALARIES AND WAGES: MALES AND FEMALES.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES.							
1938-39. Amount paid .. £	38,271,867	29,005,746	9,920,001	7,487,828	4,128,824	2,234,415	91,048,679
Per cent. on total ..	85.80	80.51	91.12	91.66	90.28	90.11	85.30
Average per employee £	239.24	224.47	238.59	220.95	235.49	212.02	231.84
1943-44. Amount paid .. £	77,087,334	58,610,714	15,984,325	15,499,866	6,367,387	4,374,295	177,923,024
Per cent. on total ..	82.43	79.25	88.45	82.84	85.84	84.22	82.04
Average per employee £	352.15	349.02	326.70	314.99	316.28	310.15	342.68
1944-45. Amount paid .. £	73,934,606	56,114,075	16,058,718	14,553,972	6,657,713	4,265,044	171,584,842
Per cent. on total ..	82.85	79.53	89.32	84.39	87.44	85.16	82.63
Average per employee £	342.98	336.03	324.60	305.39	311.36	301.54	333.03
1945-46. Amount paid .. £	73,380,046	56,772,772	16,177,608	14,651,533	7,037,530	4,353,562	172,379,050
Per cent. on total ..	83.72	80.53	89.82	87.39	89.27	86.96	83.75
Average per employee £	335.34	330.86	314.56	305.70	306.74	301.35	326.99
1946-47. Amount paid .. £	87,122,808	67,035,726	18,773,996	18,134,118	8,148,191	4,991,993	199,771,829
Per cent. on total ..	84.11	80.82	90.00	88.58	80.40	88.53	84.23
Average per employee ..	255.02	199.99	389.51	311.31	315.15	313.62	315.18
1947-48. Amount paid .. £	84,581,335	61,351,331	11,058,839	10,935,119	5,029,311	3,008,111	171,731,849
Per cent. on total ..	84.58	81.35	80.04	88.66	89.70	88.39	84.59
Average per employee ..	405.77	401.52	357.14	385.31	349.33	369.89	394.24

TOTAL AND AVERAGE SALARIES AND WAGES: MALES AND FEMALES

—continued.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
FEMALES.							
1938-39. Amount paid ..£	6,334,630	7,020,796	967,228	681,522	444,734	245,473	15,694,383
Per cent. on total ..	14.20	19.49	8.88	8.34	9.72	9.90	14.70
Average per employee £	103.66	108.25	96.00	86.44	99.58	93.19	103.92
1943-44. Amount paid ..£	16,430,992	15,350,479	2,087,364	3,211,547	1,050,208	819,303	38,949,895
Per cent. on total ..	17.57	20.75	11.55	17.16	14.16	15.78	17.96
Average per employee £	172.07	179.55	151.65	170.59	150.14	161.57	172.62
1944-45. Amount paid ..£	15,308,351	14,445,336	1,921,079	2,692,170	956,530	743,486	36,066,958
Per cent. on total ..	17.15	20.47	10.68	15.61	12.56	14.84	17.37
Average per employee £	169.83	175.27	153.12	164.86	142.91	157.09	169.44
1945-46. Amount paid ..£	14,267,414	13,726,441	1,834,360	2,115,235	846,284	652,949	33,442,683
Per cent. on total ..	16.28	19.47	10.18	12.61	10.73	13.04	16.25
Average per employee £	172.65	179.26	155.85	156.05	142.62	159.02	171.88
1946-47. Amount paid ..£	16,464,751	14,958,539	2,030,545	2,344,843	956,819	646,440	37,401,937
Per cent. on total ..	15.89	19.18	10.00	11.42	10.51	11.47	15.77
Average per employee £	190.48	196.20	167.04	169.41	155.20	173.45	188.36
1947-48. Amount paid ..£	19,318,055	17,489,972	2,504,377	2,817,779	1,106,306	796,926	44,033,415
Per cent. on total ..	15.42	18.65	10.36	11.34	10.30	11.61	15.41
Average per employee £	215.16	222.98	191.38	199.25	173.38	202.32	213.99

(v) *Managers, Clerical Staff and Other Employees.* A further analysis of salaries and wages paid is given in the following table for 1947-48 and shows the amounts paid to managers, clerical staff, etc., and those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases:—

SALARIES AND WAGES: MANAGERS, CLERICAL STAFF, ETC., AND OTHER EMPLOYEES, 1947-48.

(£.)

Salaries and Wages Paid to—

Class of Industry.	Managers, Clerical Staff, Chemists, Draftsmen, etc.		All Other Employees.		All Employees.		Total.
	Males.	Females.	Males.	Females.	Males.	Females.	
I. Treatment of Non-metalliferous Mine and Quarry Products ..	603,463	72,081	4,514,591	37,736	5,118,054	109,817	5,227,871
II. Bricks, Pottery, Glass, etc. ..	477,205	95,975	5,495,911	143,868	5,973,116	239,843	6,212,959
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	2,194,394	496,127	7,898,212	1,190,280	10,092,606	1,686,407	11,779,013
IV. Industrial Metals, Machines, Conveyances ..	14,872,847	2,885,924	98,006,012	3,325,695	112,878,859	6,211,619	119,090,478
V. Precious Metals, Jewellery and Plate ..	170,743	56,618	1,572,302	125,969	1,743,045	182,587	1,925,632
VI. Textiles and Textile Goods (not Dress)	1,424,285	479,526	9,897,645	6,583,166	11,321,930	7,062,692	18,384,622
VII. Skins and Leather (not Clothing or Footwear) ..	586,289	92,155	4,219,173	653,034	4,805,462	745,189	5,550,651
VIII. Clothing (except Knitted) ..	1,669,083	792,172	9,039,158	15,709,470	10,708,241	16,501,642	27,209,883
IX. Food, Drink and Tobacco ..	4,837,497	1,162,295	26,983,402	4,945,502	31,820,899	6,107,797	37,928,696
X. Woodworking and Basketware ..	1,301,036	232,530	13,051,723	129,131	14,352,759	361,661	14,714,420
XI. Furniture of Wood, Bedding, etc. ..	448,770	117,443	4,506,739	406,257	4,955,509	523,700	5,479,209
XII. Paper, Stationery, Printing, Book-binding, etc. ..	2,086,226	643,138	12,018,939	1,940,763	14,105,165	2,583,901	16,689,066
XIII. Rubber ..	607,095	119,607	3,128,634	354,513	3,735,729	474,120	4,209,849
XIV. Musical Instruments ..	28,035	15,074	236,859	14,516	264,894	29,590	294,484
XV. Miscellaneous Products ..	659,265	205,028	3,699,058	987,112	4,358,323	1,192,140	5,550,463
Total, Classes I. to XV.	31,060,233	7,405,003	204,202,358	35,517,012	239,224,501	14,017,715	253,242,216
XVI. Heat, Light and Power ..	537,508	17,481	4,959,750	3,229	5,497,258	20,710	5,517,968
Grand Total ..	32,503,741	7,483,174	209,228,108	36,550,241	244,731,849	14,038,415	258,765,264
Average paid per employee	554.30	232.46	377.41	210.57	394.24	213.99	348.95

3. Power, Fuel and Light Used.—(i) *In Classes of Industry, 1947-48.* The expenditure by factories on power, fuel and light, including the value of lubricants and water, is of considerable importance; in 1947-48 it amounted to a new high level of £37,093,719, an increase of £6,073,619 as compared with the previous year and more than two and one third times the corresponding value in 1938-39. The following table, shows the value of power, fuel and light, etc., used in the different classes of industry in 1947-48 :—

FACTORIES : VALUE OF POWER, FUEL AND LIGHT USED (a), 1947-48.
(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
I. Treatment of Non-metalliferous Mine and Quarry Products	523,521	383,600	183,492	131,742	124,105	89,351	1,435,811
II. Bricks, Pottery, Glass, etc.	1,049,065	491,025	80,793	154,255	99,540	19,003	1,893,681
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease	835,002	628,433	55,886	231,200	148,565	7,157	1,906,243
IV. Industrial Metals, Machines, Conveyances	6,222,134	1,368,441	390,848	1,726,039	200,288	396,530	10,304,280
V. Precious Metals, Jewellery and Plate	33,906	35,361	2,360	7,261	2,772	201	81,861
VI. Textiles and Textile Goods (not Dress)	398,266	767,964	23,168	78,799	12,501	48,128	1,328,826
VII. Skins and Leather (not Clothing or Footwear)	164,162	222,947	33,093	81,691	29,651	20,440	551,984
VIII. Clothing (except knitted)	301,298	315,943	34,254	39,748	21,937	10,388	723,568
IX. Food, Drink and Tobacco	1,946,118	1,702,883	970,657	590,932	363,352	150,151	5,724,093
X. Woodworking and Basketware	352,315	186,860	127,132	42,485	74,792	46,358	829,942
XI. Furniture of Wood, Bedding, etc.	50,229	31,076	15,230	13,432	6,345	3,030	119,342
XII. Paper, Stationery, Printing, Book-binding, etc.	336,824	554,566	43,093	91,109	22,072	216,922	1,264,586
XIII. Rubber	236,254	290,521	21,386	13,509	3,209	3,213	568,092
XIV. Musical Instruments	12,421	951	126	175	50	..	13,723
XV. Miscellaneous Products	140,160	128,286	7,581	19,467	4,474	2,098	302,066
Total, Classes I. to XV.	12,601,675	7,108,857	1,989,090	3,221,844	1,113,653	1,012,970	27,048,098
XVI. Heat, Light and Power	4,712,265	1,906,048	1,195,056	1,058,895	1,170,974	2,383	10,045,621
Grand Total	17,313,940	9,014,905	3,184,155	4,280,739	2,284,627	1,015,353	37,093,719

(a) Includes value of lubricants and water.

(ii) *Values of Items, 1947-48.* The following table shows the values of the various items of power, fuel and light used in factories in each State during the year 1947-48 :—

FACTORIES : VALUE OF ITEMS OF POWER, FUEL AND LIGHT USED(a), 1947-48.
(£.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Coal, Black	5,946,953	1,102,083	1,543,186	1,032,579	644,937	161,507	10,431,245
" Brown .. ..	..	1,088,257	..	..	..	..	1,088,257
Brown Coal Briquettes .. ..	..	884,602	..	..	..	..	884,602
Coke	2,898,059	430,593	56,952	1,009,258	62,358	60,537	4,517,757
Wood	277,902	688,425	254,352	243,091	473,614	145,018	2,082,402
Fuel Oil	1,628,148	1,248,864	318,180	682,988	453,514	99,493	4,428,187
Tar (Fuel)	192,863	109,640	148	42,240	13,530	8,219	366,640
Electricity	4,054,918	2,365,742	632,147	903,101	433,899	471,451	8,861,258
Gas	1,081,924	223,732	40,617	62,532	20,180	6,547	1,435,532
Other (Charcoal, etc.)	66,250	17,831	61,185	97,331	11,617	1,016	435,886
Water	713,913	301,800	123,301	115,511	86,055	20,521	1,450,900
Lubricating Oils	453,310	283,247	154,087	92,078	84,893	37,437	1,105,053
Total	17,313,940	9,014,905	3,184,155	4,280,739	2,284,627	1,015,353	37,093,719

(a) Includes value of lubricants and water.

(iii) *Quantities of Fuel used, 1947-48.* The following table shows the quantities of fuel used in factories in each State during the year 1947-48 :—

FACTORIES : QUANTITIES OF FUEL USED, 1947-48.

Particulars.	Unit.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Coal, Black ..	Ton	3,758,674	452,128	810,732	494,301	347,655	93,896	5,957,386
" Brown ..	"	"	4,894,588	"	"	"	"	4,894,588
Brown Coal Briquettes ..	"	"	486,064	"	"	"	"	486,064
Coke ..	"	1,496,361	164,783	23,071	309,952	24,188	16,053	2,034,408
Wood ..	"	223,841	609,134	271,640	191,901	440,880	133,039	1,870,435
Fuel Oil ..	Gal.	35,899,953	29,700,196	5,941,015	15,901,331	9,192,906	1,404,004	98,039,405
Tar (Fuel) ..	"	19,118,286	5,385,098	20,944	2,008,002	651,170	426,524	27,610,024

(iv) *Total Value, 1938-39 and 1943-44 to 1947-48.* The next table shows the sums expended on power, fuel and light during the years 1943-44 to 1947-48 compared with 1938-39 :—

FACTORIES : VALUE OF POWER, FUEL AND LIGHT USED.(a)
(£.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1938-39 ..	7,651,627	3,999,934	1,423,549	1,017,537	1,169,268	438,006	15,699,921
1943-44 ..	12,808,040	6,826,742	2,162,113	2,436,049	1,503,344	844,381	26,580,669
1944-45 ..	12,564,956	6,946,953	2,222,879	2,555,739	1,645,987	897,137	26,832,751
1945-46 ..	12,206,641	6,940,980	2,298,019	2,851,320	1,835,677	904,011	27,036,648
1946-47 ..	13,904,552	7,835,022	2,627,507	3,620,194	2,049,489	923,336	31,020,100
1947-48 ..	17,313,940	9,014,905	3,184,155	4,280,739	2,284,627	1,015,353	37,093,719

(a) Includes value of lubricants and water.

4. *Value of Materials Used.*—(i) *In Classes of Industry, 1947-48.* The value of materials used (which includes the value of containers, packing, etc., the cost of tools replaced and repairs to plant) in factories in Australia in 1947-48 reached £683,729,030 representing 56.50 per cent. of the value of the final output (see par. 5). The following table shows the value of the materials used in various classes of industry in each State :—

FACTORIES : VALUE OF MATERIALS USED, 1947-48.
(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
I. Treatment of Non-metallic Minerals and Quarry Products ..	6,367,487	2,583,885	975,967	685,690	530,647	374,826	11,518,502
II. Bricks, Pottery, Glass, etc. ..	2,724,026	1,134,177	188,661	517,153	185,818	58,190	4,808,025
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	25,852,120	16,277,080	1,789,394	4,259,821	3,486,745	338,204	52,003,364
IV. Industrial Metals, Machines, Conveyances ..	107,070,740	40,833,728	9,911,352	25,640,473	4,366,757	3,892,201	191,715,257
V. Precious Metals, Jewellery and Plate ..	666,374	1,547,748	36,656	52,358	52,756	1,251	2,357,143
VI. Textiles and Textile Goods (not Dress) ..	15,446,102	22,943,431	1,078,474	1,420,837	384,252	1,725,429	42,998,525
VII. Skins and Leather (not Clothing or Footwear) ..	7,561,710	6,013,391	4,041,437	3,864,311	442,318	324,875	22,248,044
VIII. Clothing (except Knitted) ..	19,335,257	22,797,069	2,415,030	1,667,234	1,119,668	179,321	47,513,579
IX. Food, Drink and Tobacco ..	64,031,341	62,544,990	49,903,361	17,529,019	10,703,521	5,651,295	210,363,527
X. Woodworking and Basketware ..	12,346,321	8,174,778	4,542,581	2,633,091	1,037,291	1,422,836	30,756,898
XI. Furniture of Wood, Bedding, etc. ..	4,746,468	3,006,794	1,234,335	1,046,665	721,338	216,434	10,972,034
XII. Paper, Stationery, Printing, Book-binding, etc. ..	13,862,673	11,164,810	1,741,385	1,270,518	827,737	1,163,417	30,030,540
XIII. Rubber ..	5,269,412	4,829,785	473,926	228,861	46,813	47,839	10,896,036
XIV. Musical Instruments ..	206,779	20,718	2,793	2,329	1,812	"	234,431
XV. Miscellaneous Products ..	4,181,731	3,857,684	202,871	347,391	91,159	42,143	8,722,979
Total, Classes I. to XV.	289,668,547	207,730,068	78,538,223	61,165,751	24,598,632	15,438,261	677,139,482
XVI. Heat, Light and Power ..	2,888,242	2,166,032	635,612	454,899	358,340	86,433	6,580,548
Grand Total ..	292,556,789	210,896,100	79,173,835	61,620,640	24,956,972	15,524,694	683,729,030

(ii) *Total Amount, 1938-39 and 1943-44 to 1947-48.* The following table shows the values of materials used in factories for the years 1943-44 to 1947-48 compared with 1938-39:—

FACTORIES : VALUE OF MATERIALS USED.

(£.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmanja.	Australia.
1938-39 ..	120,501,795	82,971,608	42,596,049	20,308,797	9,603,657	5,321,540	281,303,446
1943-44 ..	223,603,640	154,490,654	57,945,796	36,730,842	15,193,718	10,958,410	498,923,060
1944-45 ..	215,219,002	153,093,951	59,593,548	35,284,993	17,134,744	11,557,523	496,888,671
1945-46 ..	201,706,086	159,797,947	58,633,079	37,770,050	18,360,635	12,019,637	488,287,428
1946-47 ..	245,436,182	176,106,507	62,134,914	52,015,884	20,472,010	12,978,867	569,144,364
1947-48 ..	292,556,789	200,800,100	79,173,233	61,026,040	21,651,672	15,534,091	680,740,030

5. *Value of Output.*—(i) *In Classes of Industry, 1947-48.* The value of the output of factories in the various classes in each State in 1947-48 is shown in the following table. It represents the wholesale selling value at the factory of goods made or processed during the year, including by-products. In addition, it includes the value of other work done such as repair work, assembling and making up for customers. The figures given include not only the increase in value due to the process of manufacture, but also the values of the raw materials and the power, fuel and light used. The difference between the sum of the values of the materials and of the power, fuel and light used, and the value of output is the real value of factory production (*see par. 6*).

FACTORIES : VALUE OF OUTPUT, 1947-48.

(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
I. Treatment of Non-metaliferous Mine and Quarry Products ..	10,968,503	6,018,357	2,087,298	1,448,096	1,219,911	917,912	22,660,077
II. Bricks, Pottery, Glass, etc. ..	9,065,698	3,826,545	729,111	1,545,613	716,962	173,475	16,057,404
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	40,864,344	26,998,327	2,649,884	6,783,493	4,786,015	468,194	82,550,257
IV. Industrial Metals, Machines, Conveyances ..	204,190,215	90,004,030	24,420,868	45,616,431	10,709,869	8,387,406	383,328,819
V. Precious Metals, Jewellery and Plate ..	1,750,087	3,012,805	145,335	218,626	154,557	9,616	5,291,026
VI. Textiles and Textile Goods (not Dress)	27,397,633	40,969,968	1,689,448	2,690,904	677,206	2,982,262	76,407,511
VII. Skins and Leather (not Clothing or Footwear) ..	11,326,966	9,510,197	4,825,966	5,076,343	818,754	509,181	32,073,407
VIII. Clothing (except Knitted) ..	37,634,270	41,999,675	5,053,092	3,890,304	2,409,820	500,141	91,577,302
IX. Food, Drink and Tobacco ..	93,384,322	89,330,013	6,426,167	24,134,230	14,969,388	8,177,170	294,258,290
X. Woodworking and Basketware ..	21,949,394	15,047,370	8,780,465	4,290,138	3,363,663	2,648,260	56,079,290
XI. Furniture of Wood, Bedding, etc. ..	8,419,159	5,719,557	2,389,557	1,881,784	1,322,764	456,146	20,188,967
XII. Paper, Stationery, Printing, Book-binding etc. ..	27,579,145	21,388,413	3,920,079	3,062,984	1,935,190	3,002,384	60,888,195
XIII. Rubber ..	523,944	8,313,923	900,000	473,055	107,000	94,411	17,010,877
XIV. Musical Instruments ..	523,944	78,600	16,442	20,950	10,168		650,104
XV. Miscellaneous Products ..	9,000,000	7,885,000	1,100,000	708,700	200,000	167,000	18,880,000
Total, Classes I. to XV ..	312,312,202	310,049,454	122,343,903	101,842,255	43,521,087	28,493,824	1,178,748,445
XVI. Heat, Light and Power ..	15,964,323	7,362,571	2,920,380	2,728,829	2,104,109	290,740	31,379,952
Grand Total ..	328,276,525	317,412,025	125,264,283	104,571,084	45,625,196	28,784,564	1,210,119,397

(ii) *Total, 1938-39 and 1943-44 to 1947-48.* The following table shows the value of output in each State during each of the years shown.

FACTORIES : VALUE OF OUTPUT.

(£.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	218,410,313	152,067,611	63,321,073	35,005,264	19,548,511	11,158,205	500,419,977
1943-44 ..	399,137,690	284,647,914	90,318,437	67,578,377	29,208,888	20,848,210	891,739,216
1944-45 ..	387,658,585	287,122,311	92,718,465	65,107,602	31,740,740	21,356,939	886,004,777
1945-46 ..	367,092,216	286,081,408	91,200,751	66,222,908	32,024,839	22,119,305	867,647,517
1946-47 ..	415,917,142	315,137,079	100,099,000	76,702,572	38,260,675	24,509,748	1,011,020,206
1947-48 ..	428,181,585	327,412,025	125,264,283	104,571,084	45,625,196	28,784,564	1,210,119,397

6. Value of Production.—(i) *In Classes of Industry, 1947-48.* The value of production for any industry was defined at the Conference of Statisticians at Sydney in 1925 as "the value of consumable commodities produced during the year, deducting so far as possible, the value of goods consumed in process of production".

In accordance with this definition, it was agreed that a deduction consisting of the costs of raw material, containers, power, fuel, light, lubricants, water, tools replaced, repairs to plant and depreciation should be made from the "value of output". All these deductions with the exception of depreciation are included in the items "value of materials used" and "value of fuel used" as defined above. On account of the difficulty experienced in securing accurate figures for depreciation, it was subsequently agreed that the particulars obtained should be published but that no deduction should be made on this account for the present. The value of production as given in the following tables is obtained, therefore, by deducting "value of materials used" and "value of fuel used" from the "value of the output."

The figure thus calculated is, however, not the net value of production. The deduction for depreciation, particulars of which are shown in § 8, par. 4, was estimated at £20,591,370 for 1947-48. Many miscellaneous expenses, such as taxation, insurance, advertising and other sundry charges have not been taken into account. Therefore, it must not be inferred that when wages and salaries are deducted from the value of production the whole of the "surplus" is available for interest and profit.

The value of factory production therefore approximates "net value added" in the manufacturing process. It amounted in 1947-48 to £489.3 million to which Class IV., Industrial Metals, etc., with £181.3 million or almost three times the value of production of this class in 1938-39, made the greatest contribution. This total value of production in 1947-48 represented an increase of £78.4 million over the figure for 1946-47 and almost £286 million (or 140 per cent.) on the value of production recorded in 1938-39.

The following table shows the value of production in 1947-48 in each State for the various classes of industry:—

FACTORIES : VALUE OF PRODUCTION, 1947-48.
(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	4,077,495	3,050,872	927,839	630,664	565,159	453,735	9,705,764
II. Bricks, Pottery, Glass, etc. ..	5,292,607	2,201,343	459,657	874,205	431,604	96,282	9,355,698
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	14,177,222	10,092,814	804,604	2,292,472	1,150,705	122,833	28,640,650
IV. Industrial Metals, Machines, Conveyances ..	90,897,335	47,801,861	14,118,668	18,249,919	6,142,824	4,098,675	181,309,282
V. Precious Metals, Jewellery and Plate ..	1,049,807	1,429,696	106,319	159,007	99,029	8,164	2,852,022
VI. Textiles and Textile Goods (not Dress) ..	11,553,265	17,258,573	587,806	1,191,268	280,543	1,208,705	32,080,160
VII. Skins and Leather (not Clothing or Footwear) ..	3,601,094	3,279,859	751,436	1,130,341	346,785	163,866	9,273,381
VIII. Clothing (except Knitted) ..	17,997,715	18,886,663	2,603,808	2,183,322	1,358,215	310,432	43,340,155
IX. Food, Drink and Tobacco ..	27,406,863	25,082,140	13,389,149	6,014,279	3,902,515	2,375,724	78,170,670
X. Woodworking and Basketware ..	9,250,758	6,685,732	4,110,752	1,614,562	1,651,580	1,179,066	24,492,450
XI. Furniture of Wood, Bedding, etc. ..	3,622,462	2,681,687	1,139,992	821,687	595,081	236,682	9,097,591
XII. Paper, Stationery, Printing, Book-binding, etc. ..	13,379,648	9,669,037	2,135,601	1,701,357	1,085,381	1,622,045	29,593,069
XIII. Rubber ..	2,495,984	3,193,617	424,914	231,288	56,986	43,359	6,446,148
XIV. Musical Instruments ..	304,744	56,931	13,523	18,446	8,306	..	401,950
XV. Miscellaneous Products ..	5,140,041	3,839,704	222,573	341,843	134,689	123,025	9,801,875
Total, Classes I. to XV.	110,247,040	155,210,529	41,706,641	37,454,660	17,809,402	12,042,593	474,560,865
XVI. Heat, Light and Power ..	8,363,816	3,290,491	1,089,712	1,215,045	574,795	201,924	14,735,783
Grand Total	218,610,856	158,501,020	42,886,353	38,669,705	18,384,197	12,244,517	489,296,648

(ii) *Total and Averages, 1938-39 and 1943-44 to 1947-48.* The value of production and the amount per person engaged and per head of population are shown in the following table for the last five years compared with 1938-39. For Australia as a whole the value of production per head of population increased from £29.41 per head in 1938-39 to £64.04 per head in 1947-48. For value per person engaged, the increase was not so pronounced (from £360 per head in 1938-39 to £576 in 1947-48) owing to the considerable increase in the numbers of persons engaged in 1947-48 as compared with 1938-39.

FACTORIES : VALUE OF PRODUCTION.

(£.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
VALUE.							
1938-39 ..	90,265,891	65,996,069	19,301,475	13,678,930	8,775,586	5,398,659	203,416,610
1943-44 ..	162,726,010	123,330,518	30,210,528	28,411,486	12,511,526	9,045,419	366,235,487
1944-45 ..	159,874,627	122,377,307	30,902,038	27,267,050	12,960,009	8,902,324	362,283,355
1945-46 ..	153,179,489	120,250,487	30,269,653	25,601,628	13,826,527	9,195,657	352,323,441
1946-47 ..	186,546,408	131,496,150	35,336,069	31,066,494	15,748,476	10,667,545	410,861,742
1947-48 ..	218,610,856	158,501,020	42,886,353	38,669,705	18,384,197	12,244,517	489,296,648

PER PERSON ENGAGED.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	395	327	357	315	378	391	360
1943-44 ..	504	472	467	408	445	457	478
1944-45 ..	508	475	482	416	445	456	483
1945-46 ..	493	469	462	405	457	478	473
1946-47 ..	544	495	494	439	466	535	510
1947-48 ..	602	570	559	527	511	578	576

PER HEAD OF POPULATION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	32.99	35.25	19.15	22.99	18.79	22.72	29.41
1943-44 ..	56.66	62.22	28.65	46.11	26.15	37.04	50.53
1944-45 ..	55.09	61.23	28.92	43.75	26.73	36.05	49.47
1945-46 ..	52.23	59.66	27.92	40.57	28.21	36.74	47.42
1946-47 ..	62.95	64.46	32.21	48.50	31.67	41.90	54.83
1947-48 ..	72.71	76.60	38.54	59.28	36.13	46.77	64.04

7. *Value of Output and Cost of Production.*—As the total value of the output for Australia for 1947-48 was estimated at £1,210,119,397, there remained, after payment of £683,729,030 for the value of the materials used, £285,765,264 for salaries and wages, and £37,093,719 for power, fuel and light, a balance of £203,531,384 to provide for all other costs and overhead expenses such as rent, interest, insurance, pay-roll tax, income tax, depreciation etc., as well as drawings by working proprietors and profit. The following table gives corresponding particulars for each State expressed absolutely and as percentages on the total value of the output for the year 1947-48 :—

FACTORIES : VALUE OF OUTPUT AND COST OF PRODUCTION, 1947-48.

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	Balance (Output less Materials, Fuel and Wages.) (c)	Total Value of Output.
VALUE AND COST, ETC. (£.)					
New South Wales ..	292,556,789	17,313,940	125,345,878	93,264,978	528,481,585
Victoria ..	209,896,100	9,014,905	93,802,188	64,698,832	377,412,025
Queensland ..	79,173,835	3,184,155	24,163,216	18,723,137	125,244,343
South Australia ..	61,620,610	4,280,739	24,852,098	13,816,707	104,571,084
Western Australia ..	21,956,072	2,284,627	10,735,047	7,648,550	45,625,796
Tasmania ..	15,524,604	1,015,353	6,865,337	5,379,180	28,784,564
Australia ..	683,729,030	37,093,719	285,765,264	203,531,384	1,210,119,397

(a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant.
(b) Includes lubricant and water.
(c) See paragraph preceding this table.

FACTORIES: VALUE OF OUTPUT AND COST OF PRODUCTION, 1947-48—
continued.

State.	Materials Used. (a)	Power, Fuel and Light. (b)	Salaries and Wages.	Balance (Output less Materials, Fuel and Wages.)(c)	Total Value of Output.
PERCENTAGE OF COSTS, ETC., ON TOTAL VALUE.					
New South Wales ..	55.36	3.28	23.72	17.64	100.00
Victoria ..	55.61	2.39	24.85	17.15	100.00
Queensland ..	63.22	2.54	19.29	14.95	100.00
South Australia ..	58.93	4.09	23.77	13.21	100.00
Western Australia ..	54.70	5.01	23.53	16.76	100.00
Tasmania ..	53.93	3.53	23.85	18.69	100.00
Australia ..	56.50	3.07	23.61	16.82	100.00

(a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant
(b) Includes lubricants and water. (c) See paragraph preceding this table.

§ 8. Value of Land, Buildings, Plant and Machinery.

1. General.—The following statement shows the value of land and buildings and of plant and machinery used in connexion with manufacturing industries during the year 1947-48:—

FACTORIES: VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY(a), 1947-48.
(£.)

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Land and buildings	91,860,393	66,229,391	16,608,766	20,690,827	9,482,660	6,271,365	211,143,402
Plant and machinery	86,714,082	65,829,201	21,830,685	20,239,623	9,189,910	9,915,837	213,719,338
Total ..	178,574,475	132,058,592	38,439,451	40,930,450	18,672,570	16,187,202	424,862,740

(a) Includes estimated value of rented premises and plant.

The values recorded in this section are generally the values apportioned in the books of the individual firms after allowance has been made for depreciation, but they include estimates for premises and plant rented. The totals shown in the table consequently do not represent the actual amount of capital invested in the items specified.

2. Value of Land and Buildings.—(i) *Total for Australia, 1938-39 and 1943-44 to 1947-48.* The following table shows for Australia as a whole the approximate value of land and buildings occupied in connexion with manufacturing industries for 1938-39 and 1943-44 to 1947-48.

FACTORIES : VALUE OF LAND AND BUILDINGS(a), AUSTRALIA.
(£.)

Class of Industry.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	2,778,716	2,623,361	2,642,425	3,019,521	3,376,681	3,860,244
II. Bricks, Pottery, Glass, etc. ..	2,953,557	2,706,737	2,940,413	3,331,450	3,771,332	3,952,449
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	7,377,551	18,635,144	18,432,290	18,461,520	17,064,501	18,624,009
IV. Industrial Metals, Machines, Conveyances ..	34,841,028	60,043,410	60,783,523	59,530,238	59,008,483	64,868,139
V. Precious Metals, Jewellery and Plate ..	633,009	590,482	615,779	751,611	1,041,763	1,278,652
VI. Textiles and Textile Goods (not Dress) ..	5,999,671	8,378,695	8,770,139	9,111,725	9,608,636	10,602,891
VII. Skins and Leather (not Clothing or Footwear) ..	2,095,886	2,327,945	2,493,751	2,065,986	3,228,483	3,441,318
VIII. Clothing (except Knitted) ..	10,633,619	11,852,661	12,660,045	13,993,956	15,608,247	16,916,828
IX. Food, Drink and Tobacco ..	33,273,248	37,376,297	39,321,977	40,129,049	42,610,494	45,450,787
X. Woodworking and Basketware ..	4,106,963	4,811,963	5,030,273	5,441,290	6,156,881	6,911,869
XI. Furniture of Wood, Bedding, etc. ..	2,533,254	2,259,307	2,293,762	2,828,984	3,300,578	3,834,648
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	10,639,315	11,408,044	11,576,815	11,604,666	12,071,708	13,023,072
XIII. Rubber ..	1,676,043	1,684,331	1,737,861	1,865,044	1,990,884	2,152,455
XIV. Musical Instruments ..	104,838	98,829	116,074	133,182	193,402	233,601
XV. Miscellaneous Products ..	1,472,557	2,200,000	2,288,578	2,441,711	3,111,300	3,679,765
Total, Classes I. to XV...	121,060,585	167,080,412	172,003,662	176,133,119	182,157,472	198,830,727
XVI. Heat, Light and Power ..	9,850,820	10,057,193	10,576,445	10,806,100	10,991,312	12,312,675
Grand Total ..	130,920,414	177,146,605	182,580,107	186,939,219	193,151,784	211,143,402

(a) Includes estimated value of rented premises.

(ii) *In Classes of Industry in States, 1947-48.* The following table gives particulars of the various classes of industry in each State.

FACTORIES : VALUE OF LAND AND BUILDINGS, (a) 1947-48.
(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	1,889,441	1,179,140	237,421	237,453	116,366	200,423	3,860,244
II. Bricks, Pottery, Glass, etc. ..	2,514,320	893,342	144,265	249,019	124,869	26,634	3,952,449
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	6,806,339	4,856,756	280,273	5,737,643	860,822	82,176	18,624,009
IV. Industrial Metals, Machines, Conveyances ..	31,036,193	19,632,209	4,537,443	5,291,054	2,645,939	1,725,301	64,868,139
V. Precious Metals, Jewellery and Plate ..	510,414	581,296	49,552	61,687	65,218	10,485	1,278,652
VI. Textiles and Textile Goods (not Dress) ..	3,996,433	5,532,924	171,559	499,026	130,205	272,744	10,602,891
VII. Skins and Leather (not Clothing or Footwear) ..	1,328,306	1,449,960	161,175	302,442	133,838	65,597	3,441,318
VIII. Clothing (except Knitted) ..	7,872,047	6,396,244	769,800	903,228	840,699	134,810	16,916,828
IX. Food, Drink and Tobacco ..	17,328,190	13,030,032	6,898,269	3,940,105	2,638,870	1,615,321	45,450,787
X. Woodworking and Basketware ..	3,315,526	1,775,674	693,379	515,559	384,654	227,077	6,911,869
XI. Furniture of Wood, Bedding, etc. ..	1,489,499	1,283,650	391,320	308,976	255,376	105,827	3,834,648
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	5,487,245	4,106,951	991,875	810,939	548,100	1,077,962	13,023,072
XIII. Rubber ..	997,879	838,644	139,114	99,045	51,622	20,151	2,152,455
XIV. Musical Instruments ..	170,863	44,742	2,622	9,494	5,880	..	233,601
XV. Miscellaneous Products ..	1,875,378	1,403,856	111,880	166,440	90,861	14,322	3,679,765
Total, Classes I. to XV...	56,618,073	50,000,000	15,579,950	19,132,110	8,803,430	3,011,520	198,830,727
XVI. Heat, Light and Power ..	5,242,320	3,233,971	1,028,810	1,558,708	589,341	659,525	12,312,675
Grand Total ..	61,860,393	53,233,971	16,608,766	20,690,827	9,482,660	3,671,045	211,143,402

(a) Includes estimated value of rented premises.

(iii) *Totals in each State.* The following table shows the value of land and buildings in each State for the years 1938-39 and 1943-44 to 1947-48 :—

FACTORIES : VALUE OF LAND AND BUILDINGS.(a)
(£.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	57,353,625	42,026,245	12,299,089	8,710,700	6,813,653	3,717,102	130,920,414
1943-44 ..	78,978,013	55,062,982	13,262,504	17,629,235	6,920,805	5,293,066	177,146,605
1944-45 ..	81,058,876	57,808,861	13,689,055	16,877,449	7,654,187	5,491,679	182,580,107
1945-46 ..	80,308,347	60,264,953	14,331,556	18,446,966	8,282,694	5,304,703	186,939,219
1946-47 ..	81,894,595	62,771,493	15,391,033	18,059,534	8,756,924	5,678,205	193,151,784
1947-48 ..	91,860,393	66,229,391	16,608,766	20,690,827	9,482,660	6,271,365	211,143,402

(a) Includes estimated value of rented premises.

Prior to 1929-30 the increase in the value of land and buildings was uninterrupted, rising from £23 million in 1903 to £118 million in 1929-30, a growth of £95 million in 27 years. During the three years ended 1932-33, however, there was a decline of £12 million to £105.8 million, but since that year the value has risen annually and stood at £211.1 million in 1947-48.

3. *Value of Plant and Machinery.*—(i) *Total for Australia, 1938-39 and 1943-44 to 1947-48.* The following table shows for Australia the approximate value of plant and machinery used in factories in 1938-39 and each of the five years ended 1947-48 :—

FACTORIES : VALUE OF PLANT AND MACHINERY(a), AUSTRALIA.
(£.)

Class of Industry.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
I. Treatment of Non-metallic Mineral Products ..	7,025,382	5,059,274	4,955,979	4,910,338	5,429,881	6,060,951
II. Bricks, Pottery, Glass, etc. ..	3,144,586	2,246,369	2,509,661	2,967,696	3,423,142	3,699,837
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	6,754,248	17,411,181	19,208,586	17,791,778	15,271,732	17,515,884
IV. Industrial Metals, Machines, Conveyances ..	33,037,801	56,918,202	54,953,997	53,901,719	52,895,953	61,079,926
V. Precious Metals, Jewellery and Plate ..	197,059	219,266	207,620	253,062	375,783	580,634
VI. Textiles and Textile Goods (not Dress) ..	6,657,416	7,600,447	7,658,756	7,736,737	8,370,807	10,200,808
VII. Skins and Leather (not Clothing or Footwear) ..	973,181	1,224,852	1,264,612	1,584,051	1,707,214	1,864,369
VIII. Clothing (except Knitted) ..	2,557,388	3,225,678	3,552,809	4,134,906	4,862,517	5,905,080
IX. Food, Drink and Tobacco ..	32,100,675	31,904,522	32,692,162	33,233,935	35,133,478	37,999,396
X. Woodworking and Basketware ..	3,907,551	4,486,081	4,533,758	5,023,174	5,862,676	6,990,790
XI. Furniture of Wood, Bedding, etc. ..	727,857	545,199	572,308	740,627	929,587	1,189,427
XII. Paper, Stationery, Printing, Bookbinding, etc. ..	9,183,227	9,531,486	8,961,222	8,559,177	8,000,812	11,517,261
XIII. Rubber ..	1,367,859	1,243,448	1,191,308	1,218,861	1,416,650	1,855,042
XIV. Musical Instruments ..	11,702	14,011	18,191	23,571	65,738	80,304
XV. Miscellaneous Products ..	758,273	1,547,403	1,763,939	1,855,931	1,847,270	2,356,419
Total, Classes I. to XV. ..	108,412,205	143,207,419	144,044,998	143,938,863	147,393,260	168,896,128
XVI. Heat, Light and Power ..	35,249,922	37,785,350	39,872,062	41,606,077	42,299,831	44,823,210
Grand Total ..	143,662,127	180,992,769	183,917,060	185,544,940	189,693,091	213,719,338

(a) Includes estimated value of rented plant.

Except for the years 1930-31 to 1933-34, when decreases were recorded, there has been a continuous increase in the value of plant and machinery in Australia. The increase in 1947-48 of £24.0 million extended over all industrial classes. The greatest increase occurred in Class IV., Industrial Metals, Machines, Conveyances.

(ii) *Totals in each State.* The following table shows the value of plant and machinery in each State during the years 1943-44 to 1947-48 compared with 1938-39. During 1947-48 increases occurred in all States, New South Wales showing the largest increase, £11.5 million.

FACTORIES : VALUE OF PLANT AND MACHINERY.(a)
(£.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	62,692,956	38,626,743	18,095,415	9,749,679	8,095,064	6,402,270	143,662,127
1943-44 ..	73,803,954	55,457,719	17,886,417	18,415,477	7,364,909	8,064,293	180,992,769
1944-45 ..	73,039,252	58,571,064	18,134,011	17,955,288	8,254,231	7,063,214	183,917,060
1945-46 ..	72,560,630	58,537,394	18,690,541	19,017,955	8,507,705	8,230,715	185,544,940
1946-47 ..	75,234,273	59,124,802	19,995,249	18,408,224	8,430,574	8,499,969	189,693,091
1947-48 ..	66,714,082	65,529,201	21,830,685	20,239,623	9,189,910	9,915,837	213,719,338

(a) Includes estimated value of rented plant.

(iii) *Value according to Class of Industry, 1947-48.* The following table shows the value of plant and machinery used in factories in each State during 1947-48 according to class of industry.

FACTORIES : VALUE OF PLANT AND MACHINERY(a), 1947-48.
(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	2,978,366	1,671,133	406,380	668,439	172,225	164,408	6,060,951
II. Bricks, Pottery, Glass, etc. ..	2,221,666	852,639	156,963	249,373	176,493	42,703	3,699,837
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	7,358,092	6,095,233	273,235	2,676,720	1,077,369	35,235	17,515,884
IV. Industrial Metals, Machines, Conveyances ..	30,529,076	17,176,695	3,820,032	5,904,895	1,750,371	1,898,857	61,079,926
V. Precious Metals, Jewellery and Plate ..	205,928	311,217	18,149	22,648	19,804	2,888	580,634
VI. Textiles and Textile Goods (not Dress) ..	4,048,970	5,021,903	202,028	562,104	106,568	259,235	10,200,808
VII. Skins and Leather (not Clothing or Footwear) ..	695,642	688,251	141,661	163,600	111,783	63,432	1,864,369
VIII. Clothing (except Knitted) ..	2,543,854	2,395,651	298,046	366,672	231,888	68,969	5,905,080
IX. Food, Drink and Tobacco ..	11,715,049	9,205,956	11,011,956	2,989,901	2,061,180	1,015,354	37,999,396
X. Woodworking and Basketware ..	2,882,833	1,672,332	1,047,537	348,176	530,458	509,454	6,990,790
XI. Furniture of Wood, Bedding, etc. ..	469,009	335,510	134,611	112,257	102,894	35,146	1,189,427
XII. Paper, Stationery, Printing, Book-binding, etc. ..	4,410,030	3,253,305	640,388	783,775	301,216	2,128,547	11,517,261
XIII. Rubber ..	764,412	891,337	88,544	74,373	21,262	15,114	1,855,042
XIV. Musical Instruments ..	61,851	15,482	953	1,317	639	..	80,304
XV. Miscellaneous Products ..	1,087,599	1,033,027	47,814	86,966	86,112	14,901	2,356,419
Total, Classes I. to XV.	71,972,377	50,619,671	18,288,329	15,011,240	6,750,262	6,254,243	168,896,128
XVI. Heat, Light and Power ..	14,741,705	15,209,530	3,542,356	5,228,377	2,439,648	3,661,594	44,823,210
Grand Total ..	86,714,082	65,829,201	21,830,685	20,239,623	9,189,910	9,915,837	213,719,338

(a) Includes estimated value of rented plant.

4. *Depreciation of Land and Buildings and Plant and Machinery.*—The following table shows the allowance made for the depreciation of land and buildings and plant and machinery used in connexion with the manufacturing industries in each State during the year 1947-48 as recorded by factory proprietors at the annual census of factory production.

ALLOWANCE FOR DEPRECIATION OF LAND AND BUILDINGS AND PLANT AND MACHINERY, 1947-48.

(£.)

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
I. Treatment of Non-metaliferous Mine and Quarry Products ..	562,199	145,296	57,543	34,700	22,551	45,382	867,671
II. Bricks, Pottery, Glass, etc. ..	370,587	137,517	17,953	39,656	16,378	3,756	585,847
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	806,980	426,531	37,299	132,897	100,737	12,774	1,517,218
IV. Industrial Metals, Machines, Conveyances ..	3,368,996	1,744,563	357,474	801,590	151,362	266,059	6,690,044
V. Precious Metals, Jewellery and Plate ..	25,435	40,395	1,335	3,006	1,293	123	71,587
VI. Textiles and Textile Goods (not Dress) ..	512,729	827,725	12,196	83,552	19,679	32,930	1,488,811
VII. Skins and Leather (not Clothing or Footwear) ..	86,907	90,711	10,952	26,792	12,479	333	228,174
VIII. Clothing (except Knitted) ..	319,970	284,522	26,444	36,202	26,069	8,387	701,594
IX. Food, Drink and Tobacco ..	1,220,337	938,958	777,079	310,514	190,875	113,672	3,551,435
X. Woodworking and Basketware ..	340,795	203,422	112,873	58,997	57,338	58,859	832,284
XI. Furniture of Wood, Bedding, etc. ..	53,639	34,776	17,796	13,456	13,663	3,117	136,447
XII. Paper, Stationery, Printing, Book-binding, etc. ..	574,268	446,238	70,629	91,306	29,125	150,327	1,361,893
XIII. Rubber ..	216,363	214,256	13,329	16,276	5,471	3,719	469,414
XIV. Musical Instruments ..	7,101	1,284	39	21	109	..	8,554
XV. Miscellaneous Products ..	138,612	156,123	4,273	15,409	4,638	1,336	320,391
Total, Classes I. to XV.	8,604,918	5,692,317	1,517,214	1,664,374	651,767	700,774	18,831,364
XVI. Heat, Light and Power ..	826,410	181,269	225,255	328,138	141,096	57,838	1,760,006
Grand Total ..	9,431,328	5,873,586	1,742,469	1,992,512	792,863	758,612	20,591,370

In the following table particulars are given of the recorded values of land and buildings and plant and machinery in use by factories in Australia as at 30th June of the years 1939 and 1944 to 1948 and the value of additions and replacements made and depreciation allowed during each year.

VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY : AUSTRALIA.

(£'000.)

Year.	Book Values as at 30th June.(a)		Additions and Replacements during year.		Depreciation allowed during year.	
	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.
1938-39 ..	130,920	143,662	5,578	17,781	1,911	8,736
1943-44 ..	177,147	180,993	9,741	19,544	3,532	17,275
1944-45 ..	182,580	183,917	5,020	17,780	2,978	15,808
1945-46 ..	186,939	185,545	6,245	21,766	2,537	14,597
1946-47 ..	193,152	189,693	7,791	27,110	2,747	15,978
1947-48 ..	211,143	213,719	9,739	35,616	2,537	18,054

(a) Includes estimated value of rented premises and machinery.

§ 9. Individual Industries.

1. **General.**—The preceding pages afford a general view of the magnitude of industries in the sixteen groups adopted by the Conference of Statisticians in 1930. While it is not possible, within the limits of this work, to give a detailed account of each industry, particular industries dealt with hereunder are of special importance because of the employment which they provide for labour and capital or for other features of special interest. Where there are only one to two establishments of a particular industry in a State, details of activities are not published, but are combined with some other factory group so that operations of individual concerns will not be disclosed.

2. **Portland Cement and Cement Goods.**—The manufacture of portland cement and cement goods is an important industry included in Class I. Following changes in classification introduced in 1945-46 and 1946-47, it is now possible to publish separate details for each of the three groups Portland Cement, Asbestos Cement Sheets and Mouldings, and Other Cement Goods. Particulars for each group are shown for 1947-48 in the following table.

PORTLAND CEMENT, ASBESTOS CEMENT SHEETS ETC., AND OTHER CEMENT GOODS : AUSTRALIA, 1947-48.

Items.	Portland Cement.	Asbestos Cement Sheets and Mouldings.	Other Cement Goods.	Total.
Number of factories	10	11	307	328
Number of persons engaged	1,836	2,043	2,877	6,756
Value of land and buildings £	881,611	312,719	644,445	1,838,775
Value of plant and machinery £	1,868,805	306,675	742,468	2,917,948
Salaries and wages paid £	691,615	787,876	946,136	2,425,627
Value of power, fuel, etc., used £	877,251	43,211	39,099	959,561
Value of materials used £	1,432,803	1,510,498	1,429,257	4,372,558
Total value of output £	3,919,596	2,939,857	3,202,313	10,061,766
Value of production £	1,009,542	1,386,148	1,733,957	4,729,647
Portland cement, grey, produced .. ton	1,012,911	..	..	1,012,911
.. .. £	3,893,023	..	..	3,893,023
Asbestos Cement Building Sheets .. sq. yd.	..	19,695,311	..	19,695,311
.. .. £	..	2,076,715	..	2,076,715

3. **Chemicals, Drugs and Medicines.**—In 1945-46 the classification of factories was amended to provide for the separate tabulation of factories engaged in the production of Industrial and Heavy Chemicals and Acids and those engaged in producing Pharmaceutical and Toilet Preparations which previously had been combined. Details for each of these industries are given in the next two tables for 1947-48. However, it should be noted that in order to avoid the publication of confidential information, particulars relating to Industrial and Heavy Chemicals include details for the explosives industry.

INDUSTRIAL AND HEAVY CHEMICALS AND ACIDS (INCLUDING EXPLOSIVES), 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	91	61	16	7	6	1	182
Number of persons engaged	3,341	4,293	210	(a)	(a)	(a)	8,901
Value of land and buildings £	3,015,205	2,770,297	40,339	(a)	(a)	(a)	10,930,497
Value of plant and machinery £	3,297,318	4,166,948	76,870	(a)	(a)	(a)	9,312,880
Salaries and wages paid £	1,399,617	1,748,633	71,329	(a)	(a)	(a)	3,613,670
Value of power, fuel, etc., used £	316,791	263,902	17,285	(a)	(a)	(a)	759,986
Value of materials used £	4,127,617	3,206,094	126,267	(a)	(a)	(a)	7,862,690
Total value of output £	7,424,847	6,416,271	303,676	(a)	(a)	(a)	15,511,474
Value of production £	2,980,439	2,946,215	160,124	(a)	(a)	(a)	6,888,798

(a) Not available for publication ; included with total for Australia.

PHARMACEUTICAL AND TOILET PREPARATIONS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	140	47	4	14	6	2	213
Number of persons engaged ..	3,068	1,618	98	(a)	(a)	(a)	5,491
Value of land and buildings £	1,016,557	428,089	21,644	(a)	(a)	(a)	1,635,835
Value of plant and machinery £	318,782	314,555	5,830	(a)	(a)	(a)	726,820
Salaries and wages paid £	896,287	461,258	22,604	(a)	(a)	(a)	1,555,710
Value of power, fuel, etc., used £	27,231	21,293	622	(a)	(a)	(a)	62,550
Value of materials used £	3,197,437	1,849,319	73,068	(a)	(a)	(a)	5,750,891
Total value of output £	6,569,757	3,645,315	116,604	(a)	(a)	(a)	11,358,547
Value of production ..	£ 3,345,089	1,774,703	42,914	(a)	(a)	(a)	5,545,106

(a) Not available for publication; included with total for Australia.

4. White Lead, Paint and Varnish.—(i) *Details for each State.* The following table shows particulars of this industry for each State during 1947-48 :—

WHITE LEAD, PAINT AND VARNISH FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	67	47	9	13	6	1	143
Number of persons engaged ..	2,691	790	95	355	(a)	(a)	3,980
Value of land and buildings £	988,610	297,766	27,021	130,993	(a)	(a)	1,474,227
Value of plant and machinery £	579,698	181,300	18,407	89,251	(a)	(a)	882,794
Salaries and wages paid £	1,084,747	310,946	32,899	119,980	(a)	(a)	1,565,684
Value of power, fuel, etc., used £	83,956	16,453	1,567	6,504	(a)	(a)	109,255
Value of materials used £	4,899,180	1,985,601	263,647	867,615	(a)	(a)	8,155,047
Total value of output £	7,380,076	2,995,635	422,656	1,241,125	(a)	(a)	12,240,763
Value of production ..	£ 2,396,940	993,581	157,442	367,006	(a)	(a)	3,976,461

(a) Not available for publication; figures are included in the total for Australia.

(ii) *Total for Australia.* The next table gives particulars for the years 1943-44 to 1947-48 compared with 1938-39 :—

WHITE LEAD, PAINT AND VARNISH FACTORIES: AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	102	111	113	122	133	143
Number of persons engaged ..	2,271	2,350	2,501	3,197	3,612	3,980
Value of land and buildings £	761,345	897,777	936,927	973,166	1,064,876	1,474,227
Value of plant and machinery £	324,222	415,552	459,252	524,065	602,967	882,794
Salaries and wages paid £	535,014	727,843	792,437	1,005,121	1,243,482	1,565,684
Value of power, fuel, etc., used £	44,992	66,262	70,274	80,675	94,115	109,255
Value of materials used £	2,275,027	3,943,679	4,465,958	4,775,075	5,950,115	8,155,047
Total value of output £	3,995,104	5,931,990	6,694,321	7,304,167	9,233,244	12,240,763
Value of production £	1,585,085	1,922,049	2,158,089	2,448,417	3,189,014	3,976,461

5. Soap and Candle Factories.—(i) *Details for each State.* The following table gives particulars of soap and candle factories in each State for 1947-48 :—

SOAP AND CANDLE FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	50	17	10	5	3	3	88
Number of persons engaged ..	1,896	700	331	187	66	24	3,204
Value of land and buildings £	406,216	186,454	37,088	49,892	16,396	12,408	709,054
Value of plant and machinery £	167,852	161,384	21,875	36,792	8,003	2,151	398,057
Salaries and wages paid £	676,146	252,016	108,419	61,061	20,087	6,204	1,123,933
Value of power, fuel, etc., used £	66,221	88,230	8,444	6,319	2,475	1,155	172,844
Value of materials used £	2,397,080	1,280,420	293,932	171,856	126,913	25,804	4,295,165
Total value of output £	4,363,984	2,069,443	473,074	271,323	177,796	47,229	7,402,849
Value of production ..	£ 1,900,683	700,793	171,598	93,148	48,408	20,210	2,934,840

(ii) *Total for Australia.* The next table gives similar particulars for the years 1943-44 to 1947-48 compared with 1938-39:—

SOAP AND CANDLE FACTORIES : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	65	65	67	73	79	88
Number of persons engaged ..	2,620	2,938	2,906	3,020	3,181	3,204
Value of land and buildings ..	£ 665,546	£ 686,091	£ 675,578	£ 676,405	£ 705,060	£ 709,054
Value of plant and machinery ..	£ 576,732	£ 422,467	£ 376,788	£ 372,940	£ 376,810	£ 398,057
Salaries and wages paid ..	£ 501,174	£ 805,919	£ 779,341	£ 860,354	£ 946,193	£ 1,123,933
Value of power, fuel, etc., used ..	£ 76,283	£ 139,713	£ 126,739	£ 123,250	£ 127,517	£ 172,844
Value of materials used ..	£ 1,567,999	£ 2,757,710	£ 2,853,368	£ 3,051,046	£ 3,062,673	£ 4,295,165
Total value of output ..	£ 3,529,723	£ 5,290,607	£ 5,464,765	£ 5,801,953	£ 5,904,437	£ 7,402,849
Value of production ..	£ 1,885,441	£ 2,303,184	£ 2,484,658	£ 2,627,657	£ 2,714,247	£ 2,934,840

(iii) *Raw Materials Used and Production.* The following statement shows the quantities of certain raw materials used and the production in soap and candle factories in Australia for the years 1943-44 to 1947-48 compared with 1938-39:—

SOAP AND CANDLE FACTORIES : RAW MATERIALS USED AND PRODUCTION, AUSTRALIA.

Particulars.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Tallow used .. cwt.	535,511	856,031	859,109	834,057	768,939	893,826
Alkali used ..	229,831	201,992	203,697	160,304	153,036	156,042
Cocoa-nut oil used—refined ..	138,954	74,915	79,299	86,576	57,191	80,518
Soap made (a) ..	1,189,345	1,461,200	1,512,361	1,535,304	1,478,877	1,679,839
Candles made ..	27,459	38,291	23,159	23,194	10,539	13,362

(a) Soap made in all factories including those not classified as "Soap and Candles" factories.

The output for the year comprised the following quantities of soap:—Household, 599,144 cwt.; Flakes and Chips, 48,698 cwt.; Industrial, 60,971 cwt.; Sand, 62,293 cwt.; Toilet, 260,009 cwt.; Shaving (including Sticks and Creams), 9,517 cwt.; Soft, 23,458 cwt.; Liquid (including liquid Shampoo), 84,438 cwt.; Soap Extracts and Powders (including Shampoo Powder), 530,311 cwt. This includes 105,766 cwt. of soap made in establishments not classified as Soap and Candle Factories.

6. *Chemical Fertilizers.*—(i) *Details for each State.* The following table gives particulars of the factories engaged in the manufacture of chemical fertilizers in each State during 1947-48. Details of the consumption, imports and exports of fertilizers will be found in Chapter XX.—"Agricultural Production".

CHEMICAL FERTILIZERS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	14	8	7	7	6	5	47
Number of persons engaged ..	552	1,182	202	873	758	54	3,621
Value of land and buildings ..	£ 181,018	£ 474,124	£ 89,165	£ 365,467	£ 576,979	£ 34,780	£ 1,721,533
Value of plant and machinery ..	£ 457,379	£ 697,311	£ 101,193	£ 746,199	£ 839,670	£ 15,005	£ 2,856,957
Salaries and wages paid ..	£ 238,881	£ 541,949	£ 71,015	£ 358,869	£ 315,748	£ 22,735	£ 1,549,197
Value of power, fuel, etc., used ..	£ 46,291	£ 78,311	£ 3,810	£ 43,839	£ 95,890	£ 1,464	£ 269,605
Value of materials used ..	£ 1,217,476	£ 3,474,435	£ 682,839	£ 1,801,974	£ 2,540,752	£ 240,948	£ 9,958,424
Total value of output ..	£ 1,673,809	£ 4,626,828	£ 844,843	£ 2,425,471	£ 3,264,208	£ 269,367	£ 13,107,526
Value of production ..	£ 410,042	£ 1,071,082	£ 158,194	£ 582,058	£ 627,500	£ 26,955	£ 2,879,497

(ii) *Total for Australia.* The development of this industry since 1938-39 is set out hereunder :—

CHEMICAL FERTILIZERS : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	36	36	38	38	39	47
Number of persons engaged ..	2,540	1,818	2,452	3,127	3,459	3,621
Value of land and buildings £	1,449,157	1,454,051	1,468,653	1,571,948	1,617,318	1,721,533
Value of plant and machinery £	2,352,819	2,244,501	2,365,895	2,409,368	2,396,536	2,856,957
Salaries and wages paid £	601,477	632,115	872,466	1,091,275	1,283,817	1,549,197
Value of power, fuel, etc., used £	113,749	86,876	122,215	181,418	205,302	269,605
Value of materials used £	3,231,053	3,659,176	5,938,073	7,898,493	8,288,987	9,958,424
Total value of output £	4,944,800	4,867,464	7,700,895	10,046,710	10,577,165	13,107,526
Value of production .. £	1,599,998	1,121,412	1,640,607	1,966,799	2,082,876	2,879,497

7. *Iron and Steel Works and Engineering.*—(i) *General.* In 1945-46 the classification of factories was amended to provide for the tabulation in four separate groups of those industries previously included under Iron and Steel and Engineering. The first group (Smelting, Converting, Refining and Rolling of Iron and Steel) covers blast furnaces, steel works and rolling mills. The second group, Foundries (Ferrous), covers those engaged in the founding of iron and steel. The third group (Plant, Equipment and Machinery including Machine Tools) covers those industries engaged in the production of boilers, engines, machines including machinery, machine tools, structural steel fabrications, steel furniture, etc. The fourth group (Other Engineering) includes jobbing and general engineers not elsewhere included.

(ii) *Smelting, Converting, Refining and Rolling of Iron and Steel.* In the following table particulars are given for 1947-48 for each State for the group Smelting, Converting, Refining and Rolling of Iron and Steel.

SMELTING, CONVERTING, REFINING AND ROLLING OF IRON AND STEEL, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	17	12	..	1	1	..	31
Number of persons engaged ..	11,246	(a)	..	(a)	(a)	..	12,503
Value of land and buildings £	2,031,349	(a)	..	(a)	(a)	..	2,379,084
Value of plant and machinery £	4,964,657	(a)	..	(a)	(a)	..	5,670,072
Salaries and wages paid £	5,177,738	(a)	..	(a)	(a)	..	5,771,917
Value of power, fuel, etc., used £	3,440,427	(a)	..	(a)	(a)	..	4,232,728
Value of materials used £	24,744,251	(a)	..	(a)	(a)	..	25,418,776
Total value of output £	39,288,670	(a)	..	(a)	(a)	..	41,932,002
Value of production .. £	11,103,992	(a)	..	(a)	(a)	..	12,280,498

(a) Not available for publication ; figures are included in the total for Australia.

(iii) *Foundries (Ferrous).* Particulars covering those industries engaged in the founding of iron and steel are given for each State for 1947-48 in the following table :—

FOUNDRIES (FERROUS), 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	76	224	16	18	15	..	349
Number of persons engaged ..	2,568	2,617	422	512	478	..	6,597
Value of land and buildings £	436,948	552,715	57,333	49,118	67,137	..	1,163,251
Value of plant and machinery £	262,572	384,128	63,004	73,776	73,748	..	857,288
Salaries and wages paid £	1,083,259	1,003,973	151,584	195,572	162,969	..	2,597,357
Value of power, fuel, etc. used £	87,830	98,841	11,159	19,640	28,995	..	246,465
Value of materials used £	584,464	858,485	99,786	115,181	105,882	..	1,763,798
Total value of output £	2,182,765	2,408,338	337,000	393,389	355,168	..	5,676,660
Value of production .. £	1,510,471	1,451,012	226,055	258,568	220,291	..	3,666,397

(iv) *Plant, Equipment and Machinery including Machine Tools.* In the next table particulars are given for 1947-48 for those industries included in the third group mentioned previously.

PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS), 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	703	362	76	84	61	..	1,286
Number of persons engaged ..	20,211	14,212	3,535	5,198	1,753	..	50,909
Value of land and buildings £	4,878,587	2,705,748	480,008	663,680	287,315	..	9,016,337
Value of plant and machinery £	4,247,117	2,344,082	455,771	711,755	351,441	..	8,110,166
Salaries and wages paid £	10,000,002	8,507,108	1,170,707	1,500,731	800,315	..	22,980,863
Value of power, fuel, etc., used £	35,440	10,700	400	70,914	20,657	..	70,811
Value of materials used £	13,490,147	7,390,315	1,384,301	2,540,387	597,235	..	25,417,385
Total value of output £	28,779,152	16,093,150	3,219,532	5,375,710	1,459,253	..	54,926,797
Value of production ..	14,928,542	8,475,126	1,785,316	2,755,359	835,061	..	28,779,404

(v) *Other Engineering.* Details covering jobbing and general engineering works are given for each State for 1947-48 in the following table.

OTHER ENGINEERING, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	528	401	66	118	97	57	1,267
Number of persons engaged ..	3,917	6,023	774	2,257	515	746	14,232
Value of land and buildings £	1,561,886	1,343,663	148,031	314,149	115,153	169,745	3,652,629
Value of plant and machinery £	1,162,192	1,072,961	92,295	325,340	78,802	167,837	2,899,427
Salaries and wages paid £	1,177,757	2,250,544	246,226	734,702	132,159	261,154	4,802,542
Value of power, fuel, etc., used £	45,915	71,145	9,747	27,189	8,003	9,722	171,721
Value of materials used £	1,195,598	2,072,488	308,476	633,195	148,960	208,130	4,566,847
Total value of output £	3,255,813	5,558,920	676,060	1,680,290	384,811	598,571	12,163,472
Value of production ..	2,014,300	3,415,287	357,837	1,028,906	227,848	380,720	7,424,904

8. *Extracting and Refining of Non-ferrous Metals ; Alloys.*—(i) *Details for each State.* The following table gives particulars of metal extraction and ore reduction works, other than those connected with iron and steel. The returns exclude ore reduction works operating at mines.

EXTRACTING AND REFINING OF NON-FERROUS METALS ; ALLOYS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust. (a)	Tas.	Australia.
Number of factories ..	21	16	10	3	..	4	54
Number of persons engaged ..	1,684	208	887	1,631	..	2,433	6,843
Value of land and buildings £	297,696	59,837	275,412	103,491	..	725,022	1,461,458
Value of plant and machinery £	1,110,278	23,634	932,993	520,092	..	1,246,904	3,833,901
Salaries and wages paid £	825,182	78,760	433,272	962,701	..	1,079,115	3,379,030
Value of power, fuel, etc., used £	374,884	13,327	129,387	486,968	..	353,897	1,358,463
Value of materials used £	13,891,581	796,274	1,665,225	11,679,783	..	2,724,145	30,757,008
Total value of output £	17,539,312	1,008,904	4,873,777	13,775,900	..	5,581,700	42,779,193
Value of production ..	3,272,847	199,303	3,078,765	1,609,149	..	2,503,658	10,663,722

(a) In Western Australia the majority of the plants are worked on the mines and are therefore not included.

(ii) *Total for Australia.* The development of this industry since 1938-39 is set out hereunder :—

EXTRACTING AND REFINING OF NON-FERROUS METALS ; ALLOYS ; AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46	1946-47.	1947-48.
Number of factories ..	42	43	40	49	51	54
Number of persons engaged ..	5,532	6,321	5,885	6,060	6,507	6,843
Value of land and buildings £	1,177,348	1,358,722	1,359,548	1,384,721	1,577,706	1,461,458
Value of plant and machinery £	3,525,659	3,930,910	3,816,583	3,795,038	3,680,348	3,833,901
Salaries and wages paid £	1,613,107	2,291,782	2,173,352	2,279,972	2,856,150	3,379,030
Value of power, fuel, etc., used £	597,951	788,797	1,033,829	1,057,934	1,166,337	1,358,163
Value of materials used £	16,844,310	17,755,594	16,567,693	18,042,070	26,806,144	30,757,008
Total value of output £	21,333,872	23,513,675	22,750,733	24,626,910	37,406,311	42,779,193
Value of production ..	£ 3,891,611	4,969,284	5,149,211	5,526,906	9,433,830	10,663,722

9. *Electrical Machinery, Cables and Apparatus.*—(i) *Details for Each State.* The following table shows particulars of this industry for each State during 1947-48 :—

ELECTRICAL MACHINERY, CABLES AND APPARATUS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	358	214	361	53	59	12	732
Number of persons engaged ..	18,588	6,577	729	989	592	107	27,579
Value of land and buildings £	2,925,112	1,096,714	112,977	195,375	116,280	41,748	4,488,206
Value of plant and machinery £	2,001,600	753,506	72,191	83,245	44,438	32,983	2,987,993
Salaries and wages paid £	6,426,999	2,306,918	233,491	299,177	158,300	29,406	9,454,291
Value of power, fuel, etc., used £	203,594	65,131	4,920	11,370	5,105	1,297	291,417
Value of materials used £	0,011,641	4,204,538	326,241	473,995	247,972	45,865	14,310,252
Total value of output £	18,832,647	6,780,949	692,606	986,225	509,908	88,940	27,891,275
Value of production ..	£ 9,617,412	2,511,280	361,445	500,860	256,831	41,778	13,289,606

(ii) *Total for Australia.* The increased output of electrical energy in Australia within recent years, referred to in par. 39 below, caused a corresponding demand for electrical equipment. Difficulties, due to war, in obtaining electrical equipment from abroad have been responsible for considerable development in the manufacture of electrical goods and equipment in Australia, as shown in the following table.

ELECTRICAL MACHINERY, CABLES AND APPARATUS : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	360	431	475	551	658	732
Number of persons engaged ..	10,666	20,659	21,669	22,825	25,077	27,579
Value of land and buildings £	1,627,183	2,713,999	2,829,443	3,507,375	3,950,804	4,488,206
Value of plant and machinery £	896,553	1,724,045	1,806,169	2,084,018	2,524,818	2,987,993
Salaries and wages paid £	2,031,098	5,710,782	5,857,210	6,301,035	7,455,375	9,454,291
Value of power, fuel, etc., used £	104,594	193,542	190,677	208,729	244,384	291,417
Value of materials used £	3,195,032	7,804,575	7,991,641	8,085,443	10,467,524	14,310,252
Total value of output £	6,954,498	16,346,709	16,892,366	17,789,829	21,996,743	27,891,275
Value of production ..	£ 3,654,872	8,348,592	8,710,048	9,495,657	11,284,835	13,289,606

10. **Railway and Tramway Workshops.**—(i) *Details for each State, 1947-48.* The railway and tramway workshops which form an important item in Class IV. are chiefly State-owned institutions and their development is a reflection of the growth of the railway and tramway systems of Australia. The following table includes, in addition, municipal establishments for manufacturing and repairing rolling stock. Private institutions numbering 9 in 1947-48 have been excluded :—

TRAMCARS AND RAILWAY ROLLING STOCK(a), 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	49	25	11	14	22	7	128
Number of persons engaged ..	17,195	6,873	5,358	4,206	3,039	825	37,496
Value of land and buildings £	3,679,641	1,392,840	564,346	1,096,922	569,960	209,799	7,513,508
Value of plant and machinery £	3,966,697	375,743	477,065	1,028,610	497,960	178,945	6,525,018
Salaries and wages paid £	7,016,379	2,587,775	1,699,598	1,603,014	1,071,466	319,170	14,297,402
Value of power, fuel, etc., used £	151,029	64,724	39,053	64,053	41,751	11,016	371,626
Value of materials used £	4,426,750	1,824,810	923,626	881,435	914,522	103,229	9,074,372
Total value of output £	12,987,090	5,168,993	2,959,151	2,804,929	2,436,428	476,456	26,833,047
Value of production ..	£ 8,409,311	3,279,459	1,996,472	1,859,441	1,480,155	362,211	17,387,049

(a) Government and municipal only.

A railway workshop in the Northern Territory is chiefly engaged in making repairs to rolling stock, etc., no new goods being manufactured. Particulars of this establishment are not included in any of the tables in this chapter.

(ii) *Total for Australia.* The following table shows the development of railway and tramway workshops in Australia since 1938-39 :—

TRAMCARS AND RAILWAY ROLLING STOCK(a) : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	117	116	116	115	115	128
Number of persons engaged ..	27,310	39,058	37,972	36,962	37,347	37,496
Value of land and buildings £	6,736,924	6,902,264	6,911,284	6,960,491	7,081,749	7,513,508
Value of plant and machinery £	5,390,179	5,707,808	5,824,725	6,034,499	5,647,996	6,525,018
Salaries and wages paid £	6,720,990	13,407,931	12,463,846	11,656,718	12,051,260	14,297,402
Value of power, fuel, etc., used £	226,108	454,130	418,288	371,865	370,715	371,626
Value of materials used £	4,976,353	8,590,203	8,056,849	8,143,346	8,131,925	9,074,372
Total value of output £	13,223,114	24,947,557	23,099,306	22,308,803	22,773,668	26,833,047
Value of production ..	£ 8,020,653	15,903,224	14,624,169	13,793,592	14,271,028	17,387,049

(a) Government and Municipal only.

11. **Motor Vehicles.**—The industries catering for the motor trade are included in Class IV. "Industrial Metals, Machines and Conveyances". In the table below a summary is given of the principal statistics for 1947-48 for each branch of industry associated with the motor trade of Australia.

MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC. : AUSTRALIA, 1947-48.

Items.	Construction and Assembly.	Motor Bodies.	Repairs.	Motor Accessories.	Total.
Number of factories ..	55	337	4,082	118	4,592
Number of persons engaged ..	6,902	13,990	29,886	5,210	55,988
Value of land and buildings ..	£ 1,445,261	2,060,236	9,557,873	988,158	14,051,528
Value of plant and machinery ..	£ 821,208	1,228,894	2,843,230	1,026,724	5,920,056
Salaries and wages paid ..	£ 2,815,700	5,287,738	8,726,121	2,054,144	18,883,703
Value of power, fuel, etc., used ..	£ 93,223	124,705	282,037	97,579	597,544
Value of materials used ..	£ 645,070	6,674,612	9,321,832	1,875,859	18,517,373
Total value of output ..	£ 5,821,317	13,567,021	23,350,141	5,118,418	47,865,897
Value of production ..	£ 5,083,024	6,767,704	13,755,272	3,144,980	28,750,980

In the next table similar details are shown on a State basis for these branches combined.

MOTOR VEHICLES : CONSTRUCTION, ASSEMBLY, REPAIRS, ETC., 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas. (a)	Australia.
Number of factories ..	1,768	1,335	564	308	458	159	4,592
Number of persons engaged ..	17,343	19,250	5,380	9,780	3,033	1,202	55,988
Value of land and buildings £	5,642,080	4,703,374	1,070,280	1,307,207	807,760	430,821	14,051,528
Value of plant and machinery £	1,883,447	2,072,766	453,000	1,126,476	303,492	80,875	5,920,056
Salaries and wages paid £	5,633,041	6,865,546	1,515,960	3,672,762	869,930	326,458	18,883,703
Value of power, fuel, etc., used £	202,480	204,354	52,509	97,618	33,602	6,981	597,544
Value of materials used £	5,311,075	6,120,718	1,524,720	4,077,108	1,142,520	341,232	18,517,373
Total value of output £	14,980,457	15,964,429	4,446,260	8,897,166	2,726,227	851,358	47,865,897
Value of production ..	9,466,902	9,639,357	2,869,031	4,722,440	1,550,105	503,145	28,750,986

(a) Includes horse-drawn vehicles.

The table below shows the output of motor bodies together with the number imported into Australia for 1938-39 and the years 1942-43 to 1947-48 :—

MOTOR BODIES (a) : PRODUCTION AND IMPORTS, AUSTRALIA.

Items.	1938-39.	1942-43.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Motor Bodies—							
Number made .. No.	79,436	44,286	29,309	22,805	19,473	45,374	58,354
Value .. £	6,421,142	4,652,771	2,582,912	2,530,043	2,356,778	5,690,715	9,209,651
Number imported .. No.	532	270	194	0	223	743	13,724
Value .. £	64,571	64,991	60,231	1,295	34,050	148,999	2,174,214

(a) Excludes sidecars.

In the next table particulars are given of the number and value of motor chassis imported into Australia for the years shown.

MOTOR CHASSIS : IMPORTS, AUSTRALIA.

Items.	1938-39.	1942-43.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number imported .. No.	76,094	14,547	9,186	6,660	10,113	66,785	66,832
Value .. £	7,315,321	4,056,496	2,900,638	3,153,608	1,870,046	11,479,744	15,180,490

12. Agricultural Machines and Implements.—(i) *General.* Owing to the extensive agricultural activities conducted in Australia and the demand for modern mechanized farm equipment the manufacture of agricultural implements constitutes an important branch of Australian industry. The articles manufactured include a wide range of implements for tillage, seeding and planting and the harvesting of crops. Other farm machinery made includes oil engines, windmills, chaff-cutters and machinery used in the dairying industry.

(ii) *Details for States.* The following table gives details of agricultural implement works in each State for 1947-48 :—

AGRICULTURAL MACHINES AND IMPLEMENTS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	63	64	17	30	12	..	186
Number of persons engaged ..	1,826	4,557	1,315	1,329	158	..	9,185
Value of land and buildings £	372,600	836,504	108,095	151,042	62,699	..	1,530,940
Value of plant and machinery £	220,470	1,034,171	131,909	218,248	20,537	..	1,625,335
Salaries and wages paid £	668,005	1,869,139	439,246	466,774	55,694	..	3,498,858
Value of power, fuel, etc., used £	25,895	118,699	20,332	38,599	1,135	..	204,600
Value of materials used £	806,174	1,808,505	442,240	503,511	18,189	..	3,578,610
Total value of output £	1,778,208	4,106,863	991,997	1,120,825	90,780	..	8,307,613
Value of production ..	946,139	2,480,250	532,395	578,715	77,456	..	4,614,964

(iii) *Total for Australia.* Comparative statistics for 1938–39 and the years 1943–44 to 1947–48 are given hereunder :—

AGRICULTURAL MACHINES AND IMPLEMENTS : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	161	145	146	172	181	186
Number of persons engaged ..	6,563	9,178	9,149	9,510	8,743	9,185
Value of land and buildings £	996,949	1,046,702	1,035,331	1,199,952	1,251,975	1,530,940
Value of plant and machinery £	910,520	1,121,626	1,265,985	1,229,597	1,232,482	1,625,335
Salaries and wages paid £	1,373,213	2,821,968	2,745,909	2,893,892	2,856,273	3,498,858
Value of power, fuel, etc., used £	81,736	198,680	187,970	186,150	172,416	204,060
Value of materials used £	1,485,018	2,822,460	2,817,698	2,717,302	2,901,313	3,578,619
Total value of output £	3,403,091	6,604,402	6,589,942	6,701,344	6,717,194	8,397,643
Value of production .. £	1,836,337	3,583,262	3,584,274	3,797,892	3,643,465	4,614,964

13. *Wireless and Amplifying Apparatus.*—The introduction of wireless broadcasting in 1923 gave rise to a new industry in Australia. Early statistical details of the industry are not available as they were grouped together with other electrical apparatus. In 1930–31 a new classification of factories was adopted and “Wireless Apparatus” was shown as a separate industry. The industry is confined mainly to New South Wales and Victoria, but is becoming increasingly important in South Australia. The number of broadcast listeners’ licences increased from 331,128 in 1930–31 to 1,832,816 in 1947–48 and this increase reflects the advancement of the industry during that period. During the war years considerable expansion took place in the industry to meet the requirements of the fighting services and apart from a slight drop in output in 1945–46, this expansion has continued.

WIRELESS AND AMPLIFYING APPARATUS : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	72	85	89	97	127	134
Number of persons engaged ..	4,828	11,020	10,534	8,709	8,935	9,543
Value of land and buildings £	557,953	895,642	998,470	969,105	1,133,159	1,115,494
Value of plant and machinery £	305,468	613,088	643,914	711,802	587,179	643,732
Salaries and wages paid £	754,302	2,959,291	2,784,985	2,295,866	2,500,401	3,070,098
Value of power, fuel, etc., used £	23,525	68,553	70,055	58,240	62,365	91,072
Value of materials used £	1,355,083	3,379,511	3,445,575	3,446,056	4,169,444	4,919,068
Total value of output £	2,502,338	7,190,028	7,290,352	6,514,933	7,721,018	9,235,861
Value of production .. £	1,123,130	3,741,964	3,774,722	3,610,639	3,489,209	4,224,821

The number of domestic receiving sets assembled in 1947–48 was 333,332 and the number of domestic chassis (unmounted) made was 119,747 compared with 163,821 and 123,655 respectively in 1938–39.

14. *Cotton.*—(i) *General.* Cotton has been grown in Australia since 1860, but never on a very large scale. The average annual quantity of unginned cotton produced during the five years ended 1938–39 was 18 million lb. and slightly under 5 million lb. in the five years ended 1947–48. Arising out of the development in the local manufacture of cotton materials and the further expansion following the outbreak of war in 1939, plans were completed for an extension of the area devoted to the cultivation of this crop, but since the commencement of the Pacific War there has been a definite downward trend. The growing of cotton, which is restricted to Queensland, is referred to in some detail in Chapter XX.—“Agricultural Production”.

(ii) *Ginning.* The ginning and marketing of cotton is controlled by the Queensland Cotton Board. The Board operates ginneries and processes by-products. The production of raw cotton is insufficient for local factory requirements and is supplemented by imports from overseas, chiefly from India, Brazil and the United States of America.

(iii) *Spinning and Weaving.* The recent expansion in the spinning and weaving section of the cotton industry marks an important event in its development. New factories have been established and Australia is now producing an extensive range of

cotton goods, including duck and canvas from cotton or flax, denims, drill, etc., tyre cord and tyre cord fabric. The number of establishments engaged in cotton spinning and weaving in Australia and other particulars of the industry are given in the following table for the five years ended 1947-48 in comparison with 1938-39.

COTTON SPINNING AND WEAVING : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	33	70	74	78	81	79
Number of persons engaged ..	3,589	7,908	7,667	7,253	7,765	7,702
Value of land and buildings £	703,790	1,427,401	1,523,800	1,529,150	1,709,711	1,867,737
Value of plant and machinery £	735,529	2,080,785	2,170,792	1,913,775	1,985,327	2,042,326
Salaries and wages paid £	493,109	1,768,268	1,732,481	1,714,669	2,152,044	2,511,918
Value of power, fuel, etc., used £	50,011	142,534	146,726	149,990	186,563	209,096
Value of materials used £	1,337,280	5,375,438	5,370,733	4,559,560	5,574,689	6,075,570
Total value of output £	2,385,990	8,930,324	8,879,653	7,936,716	9,499,843	10,371,439
Value of production ..	978,699	3,412,352	3,362,194	3,227,166	3,738,591	4,086,773

15. Wool Carding, Spinning and Weaving.—(i) *Details for each State.* The importance of this industry is emphasized by the fact that Australia is the world's chief source of wool and the development of the woollen industry since its establishment at an early period in Australian history is of singular interest. The production consists chiefly of woollen cloth and tweed, worsted cloth rugs, blankets and yarn, all of which have acquired a reputation for purity and durability. The following table gives particulars for 1947-48.

WOOL CARDING, SPINNING AND WEAVING, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	52	76	3	4	2	5	142
Number of persons engaged ..	8,107	11,298	(a)	602	(a)	2,532	23,480
Value of land and buildings £	1,238,986	1,830,130	(a)	41,000	(a)	214,186	3,459,547
Value of plant and machinery £	1,376,292	1,703,135	(a)	68,363	(a)	180,071	3,527,484
Salaries and wages paid £	2,404,414	3,606,286	(a)	187,504	(a)	740,681	7,164,651
Value of power, fuel, etc., used £	187,701	386,195	(a)	29,451	(a)	44,577	672,032
Value of materials used £	5,067,287	8,574,541	(a)	376,251	(a)	1,543,043	16,072,097
Total value of output £	9,209,076	15,484,006	(a)	703,182	(a)	2,717,853	29,030,831
Value of production ..	4,014,028	6,523,270	(a)	297,480	(a)	1,130,233	12,286,702

(a) Not available for publication; figures are included in total for Australia.

(ii) *Total for Australia.* The extent of the wool textile industry in Australia in the years 1943-44 to 1947-48 compared with 1938-39 is shown in the following table. Detailed particulars for the several States are not available for publication.

WOOL CARDING, SPINNING AND WEAVING : AUSTRALIA.

Items.	1938-39. (a)	1943-44.	1944-45. (a)	1945-46	1946-47.	1947-48.
Number of factories ..	90	116	122	114	126	142
Number of persons engaged ..	19,668	24,858	23,095	21,536	22,851	23,480
Value of land and buildings £	2,380,009	2,867,297	2,996,246	3,028,066	3,080,180	3,459,547
Value of plant and machinery £	3,369,517	2,995,835	2,967,011	2,925,811	3,060,414	3,527,484
Salaries and wages paid £	2,887,907	5,896,320	5,484,589	5,324,388	6,685,426	7,164,651
Value of power, fuel, etc., used £	392,537	658,800	609,139	511,417	615,667	672,032
Value of materials used £	7,331,117	15,455,106	13,780,546	12,314,412	14,133,889	16,072,097
Total value of output £	12,514,610	25,433,289	23,250,907	21,776,975	25,153,735	29,030,831
Value of production ..	4,790,956	9,319,383	8,861,222	8,951,150	10,404,179	12,286,702
Woolen cloth and tweed sq. yd.	8,336,226	13,055,109	12,679,864	16,797,262	18,211,138	18,811,635
Worsted Cloth ..	17,986,091	19,944,042	17,296,854	12,643,557	14,276,818	16,459,496
Serge ..	792,314	1,840,316	1,395,201	1,022,388	746,048	827,789
Flannel—						
For outer clothing ..	2,113,835	2,611,476	2,205,171	2,102,836	2,608,117	3,327,606
For underwear (pure) ..	1,557,373	2,704,382	2,020,022	1,566,932	1,850,643	1,641,085
For underwear (mixtures) ..	813,530	218,431	185,630	655,803		
Blankets .. pair	573,795	1,687,720	1,507,395	681,037	692,647	721,089

(a) Includes Wooll scouring Works in Victoria and Tasmania and Wooll scouring Works and Feltmongeries in South Australia.

16. **Hosiery and Other Knitted Goods.**—(i) *Details for each State.* In addition to the woollen mills there were 420 hosiery and knitting mills operating in Australia during 1947-48. The total number of persons engaged in these establishments was 20,337, of whom 14,160 were females. Details for each State are shown in the following table :—

HOSIERY AND OTHER KNITTED GOODS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	120	276	2	9	7	4	420
Number of persons engaged ..	5,911	13,741	(a)	122	154	(a)	20,337
Value of land and buildings £	937,238	1,747,451	(a)	17,600	19,172	(a)	2,753,994
Value of plant and machinery £	673,744	1,223,883	(a)	12,328	16,653	(a)	1,964,508
Salaries and wages paid £	1,668,751	3,123,131	(a)	28,112	3,331	(a)	5,499,665
Value of power, fuel, etc., used £	59,614	168,766	(a)	989	1,553	(a)	235,077
Value of materials used £	3,693,096	6,929,171	(a)	32,550	88,665	(a)	10,897,809
Total value of output £	6,614,347	13,496,207	(a)	82,977	157,784	(a)	20,661,106
Value of production ..	£ 2,861,637	6,398,270	(a)	49,438	67,566	(a)	9,528,220

(a) Not available for publication; figures are included in the total for Australia.

(ii) *Total for Australia.* Comparative statistics for 1938-39 and the years 1943-44 to 1947-48 are shown in the following table :—

HOSIERY AND OTHER KNITTED GOODS : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	313	341	363	376	397	420
Number of persons engaged ..	18,159	16,017	16,691	17,091	19,204	20,337
Value of land and buildings £	1,962,336	2,243,181	2,354,232	2,444,369	2,608,352	2,753,994
Value of plant and machinery £	1,930,564	1,367,754	1,295,962	1,358,482	1,521,026	1,964,508
Salaries and wages paid £	2,331,536	3,187,545	3,290,370	3,687,445	4,502,549	5,499,665
Value of power, fuel, etc., used £	133,154	168,218	169,935	185,159	212,469	235,077
Value of materials used £	4,284,216	7,873,375	7,141,525	7,202,997	8,786,552	10,897,809
Total value of output £	8,226,468	13,771,177	13,038,366	13,252,876	16,831,684	20,661,106
Value of production ..	£ 3,809,098	5,729,584	5,726,906	5,864,720	7,832,663	9,528,220

(iii) *Raw Materials used and Production, 1947-48.* The main raw materials consumed in establishments manufacturing hosiery and other knitted goods during 1947-48 consisted of woollen yarn, 9,761,887 lb; cotton yarn, 8,725,841 lb.; and rayon yarn, 5,227,106 lb. Production comprised 38,346,048 garments, valued at £10,240,160; 1,567,448 dozen pairs of stockings, valued at £4,657,275; and 1,982,097 dozen pairs of socks, valued at £2,769,945.

17. **Tanning, Currying and Leather Dressing.**—(i) *Details for each State.* In Class VII. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser sorts of leathers, but there are now very few kinds which cannot be produced locally, and an export trade has been built up in some varieties.

TANNING, CURRYING AND LEATHER DRESSING, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	74	44	13	11	5	2	149
Number of persons engaged ..	1,969	2,385	600	188	(a)	(a)	5,361
Value of land and buildings £	475,526	535,292	62,759	35,177	(a)	(a)	1,154,301
Value of plant and machinery £	357,085	354,257	79,301	28,139	(a)	(a)	857,186
Salaries and wages paid £	818,405	1,000,531	215,883	67,706	(a)	(a)	2,182,874
Value of power, fuel, etc., used £	62,259	78,484	14,362	4,301	(a)	(a)	165,777
Value of materials used £	2,542,668	2,592,019	728,808	196,159	(a)	(a)	6,308,195
Total value of output £	3,805,662	4,214,377	1,091,525	295,515	(a)	(a)	9,804,867
Value of production ..	£ 1,200,735	1,543,874	318,355	95,055	(a)	(a)	3,330,895

(a) Not available for publication; figures are included in the total for Australia.

(ii) *Total for Australia.* The development of the tanning industry during the years 1938-39 and 1943-44 to 1947-48 is shown in the following table:—

TANNING, CURRYING AND LEATHER DRESSING : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	132	142	147	152	154	149
Number of persons engaged ..	4,375	4,631	4,668	5,022	5,428	5,361
Value of land and buildings ..	813,713	919,016	952,161	1,048,240	1,127,454	1,154,301
Value of plant and machinery ..	523,538	543,796	605,625	704,551	785,894	857,186
Salaries and wages paid ..	919,781	1,495,549	1,520,672	1,662,156	1,953,573	2,182,874
Value of power, fuel, etc., used ..	87,670	135,568	131,818	127,824	148,501	165,777
Value of materials used ..	2,983,041	5,007,149	4,959,660	5,237,697	6,218,200	6,308,195
Total value of output ..	4,592,642	7,569,327	7,552,095	8,055,696	9,646,020	9,804,867
Value of production ..	1,521,931	2,426,610	2,460,617	2,690,175	3,279,310	3,330,895

(iii) *Raw Material Used and Production.* The quantities of raw material used and leather produced in tanneries in each State in 1947-48 are shown in the following table. Some leather is also produced in works other than tanneries, but this is excluded.

TANNERIES : RAW MATERIAL USED AND PRODUCTION, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Hides .. No.	896,698	1,041,683	371,241	(a)	130,340	(a)	2,560,818
Skins—							
Calf ..	550,752	563,685	(a)	2,372	(a)	(a)	1,282,810
Goat ..	1,113,387	(a)	(a)	..	..	..	1,231,771
Sheep ..	1,301,779	603,724	(a)	(a)	..	(a)	1,957,120
Marsupial ..	22,484	69,719	(a)	(a)	..	..	137,095
Pelts treated ..	1,962,859	(a)	(a)	(a)	..	..	2,716,454
Bark used—							
Wattle .. tons	3,551	4,284	2,482	1,357	(a)	(a)	11,807
Mallet ..	..	787	..	..	463	..	1,250
Other ..	(a)	830	..	(a)	56	..	1,773
Tanning extract used ..	4,992	3,158	2,153	(a)	1,091	(a)	11,792
Leather made—							
Sole and Belting lb.	12,215,201	13,015,662	7,647,858	1,237,592	(a)	(a)	36,952,207
Harness ..	751,020	500,427	560,256	490,034	48,088	..	2,349,825
Upholstery .. sq. ft.	(a)	(a)	..	(u)	..	..	8,938,966
Dressed and Upper from Hides—							
Sold by Measurement—							
Patent sq. ft.	288,605	1,000,209	..	..	..	..	1,288,814
All Other ..	13,086,059	17,688,530	5,316,980	1,638,161	(a)	(a)	39,870,123
Sold by Weight (all kinds) lb.	55,774	191,649	(a)	129,846	(a)	(a)	408,227
Dressed from skins—							
Calf .. sq. ft.	4,051,635	4,385,787	(a)	(a)	38,611	(a)	9,504,464
Goat ..	4,916,781	(a)	(a)	(a)	..	..	5,460,300
Sheep ..	12,497,407	3,657,959	(a)	(a)	(a)	..	19,737,507
Marsupial ..	70,019	340,737	(a)	(a)	..	..	562,905

(a) Not available for publication; figures are included in the total for Australia.

18. *Tailoring and Ready-made Clothing Factories.*—(i) *Details for each State.* Statistics showing the distribution in 1947-48 of this industry between States are shown in the following table:—

TAILORING AND READY-MADE CLOTHING FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	848	411	142	139	123	24	1,687
Number of persons engaged ..	19,021	8,914	3,071	2,665	1,253	451	35,375
Value of land and buildings ..	2,739,415	1,215,187	320,084	385,390	190,605	64,685	4,915,366
Value of plant and machinery ..	728,979	299,183	66,917	84,021	25,314	10,961	1,215,375
Salaries and wages paid ..	4,412,237	2,278,751	618,654	548,594	228,729	99,170	8,186,135
Value of power, fuel, etc., used ..	77,127	45,164	10,650	11,285	3,962	1,532	149,720
Value of materials used ..	8,199,453	4,978,547	1,098,265	602,350	275,879	78,239	15,232,733
Total value of output ..	14,929,998	8,556,628	2,149,808	1,391,780	632,985	211,467	27,872,666
Value of production ..	6,053,418	3,532,917	1,040,893	778,145	353,144	131,696	12,490,211

(ii) *Total for Australia.* Details for the five years 1943-44 to 1947-48 compared with 1938-39 are as follows:—

TAILORING AND READY-MADE CLOTHING FACTORIES : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	1,177	1,160	1,268	1,420	1,576	1,687
Number of persons engaged ..	26,499	25,872	28,108	30,047	33,441	35,375
Value of land and buildings ..	3,175,748	3,453,279	3,728,531	4,141,584	4,055,424	4,915,306
Value of plant and machinery ..	355,503	567,800	680,437	828,695	965,547	1,225,375
Salaries and wages paid ..	3,168,472	4,543,027	4,970,774	5,506,614	6,899,245	8,186,135
Value of power, fuel, etc., used ..	72,431	98,915	104,945	116,616	133,904	149,720
Value of materials used ..	4,945,519	8,843,064	9,416,961	9,616,801	12,255,029	15,232,733
Total value of output ..	9,830,646	16,189,527	17,588,937	18,614,368	23,244,804	27,872,666
Value of production ..	4,811,696	7,247,548	8,067,031	8,880,951	10,555,871	12,490,213

19. *Dressmaking, Hemstitching and Millinery Establishments.*—Particulars of dressmaking, hemstitching and millinery establishments in Australia for the five years ended 1947-48 compared with 1938-39 are shown in the following table:—

DRESSMAKING, HEMSTITCHING AND MILLINERY ESTABLISHMENTS : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	869	838	904	998	1,002	1,175
Number of persons engaged ..	16,398	13,822	15,604	18,051	20,437	20,893
Value of land and buildings ..	2,051,611	2,149,258	2,335,994	2,723,617	2,956,035	3,303,687
Value of plant and machinery ..	189,263	237,809	279,771	362,065	438,127	509,603
Salaries and wages paid ..	1,652,808	2,134,257	2,436,294	3,037,698	3,768,483	4,367,523
Value of power, fuel, etc., used ..	33,067	39,699	45,088	57,379	66,489	77,300
Value of materials used ..	2,609,363	4,093,738	4,601,884	5,280,433	6,238,057	8,300,052
Total value of output ..	5,234,727	7,874,479	8,861,186	10,860,702	12,767,111	15,403,545
Value of production ..	2,592,297	3,741,042	4,159,187	5,169,980	6,025,812	7,288,043

20. *Shirts, Collars and Underclothing.*—(i) *Details for each State.* Particulars of this industry are shown for 1947-48 in the following table:—

SHIRTS, COLLARS AND UNDERCLOTHING, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	194	142	18	32	18	..	404
Number of persons engaged ..	5,492	4,466	903	518	501	..	11,880
Value of land and buildings ..	768,643	681,809	51,000	5,000	47,135	..	1,631,574
Value of plant and machinery ..	272,873	210,535	33,324	18,679	12,460	..	547,871
Salaries and wages paid ..	1,226,412	1,003,249	199,011	99,269	93,810	..	2,621,751
Value of power, fuel, etc., used ..	20,310	19,203	3,340	1,594	979	..	45,081
Value of materials used ..	3,165,167	3,376,470	220,190	126,142	178,218	..	7,066,187
Total value of output ..	5,111,241	5,235,855	518,379	204,220	302,527	..	11,403,829
Value of production ..	1,931,554	1,800,120	294,864	138,793	128,630	..	4,353,961

(ii) *Total for Australia.* The following table shows the progress of the industry since 1938-39:—

SHIRTS, COLLARS AND UNDERCLOTHING : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	283	298	320	347	376	404
Number of persons engaged ..	11,081	9,716	9,984	9,902	11,184	11,880
Value of land and buildings ..	945,972	1,079,603	1,145,703	1,310,863	1,425,838	1,631,574
Value of plant and machinery ..	239,579	275,596	315,106	396,597	468,581	547,871
Salaries and wages paid ..	1,142,855	1,574,283	1,673,299	1,728,513	2,252,398	2,621,751
Value of power, fuel, etc., used ..	23,639	26,162	27,707	31,626	40,538	45,081
Value of materials used ..	2,650,779	4,874,577	4,968,808	4,445,741	5,500,294	7,066,187
Total value of output ..	4,435,209	7,339,928	7,697,154	7,078,821	9,041,903	11,465,829
Value of production ..	1,760,791	2,439,189	2,700,639	2,601,454	3,411,071	4,353,961

21. **Boot and Shoe Making.**—(i) *Boot and Shoe (not Rubber) Factories.* The boot and shoe factories hold an important place both in regard to employment afforded and extent of output. The following table relates to 1947-48 and refers to boot and shoe factories as distinct from those devoted to repairing and bespoke work. It has been necessary to include details of Boot and Shoe Repairing factories in Tasmania, in order to conceal confidential information for that State. Factories engaged in the manufacture of rubber boots and shoes are excluded, being classified under Rubber Goods (including Tyres made); *vide par.* 38.

BOOT AND SHOE (NOT RUBBER) FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas. (a)	Australia.
Number of factories ..	188	231	24	22	11	16	492
Number of persons engaged ..	7,626	11,039	1,347	1,413	638	167	22,230
Value of land and buildings £	789,090	909,039	74,098	93,545	53,495	20,845	1,940,712
Value of plant and machinery £	391,345	784,065	88,980	123,683	59,835	12,275	1,460,183
Salaries and wages paid £	2,214,984	3,302,882	368,955	387,775	165,294	43,164	6,483,054
Value of power, fuel, etc., used £	31,895	52,762	3,690	5,626	2,488	634	97,095
Value of materials used £	3,149,093	5,325,123	538,931	511,776	237,057	66,667	9,828,647
Total value of output £	6,347,017	10,332,454	1,049,949	990,306	463,041	124,918	19,307,685
Value of production ..	£ 3,166,029	4,954,569	507,328	472,904	223,496	57,617	9,381,943

(a) Includes details of Boot and Shoe Repairing.

(ii) *Quantity and Value of Production.* The number and value of boots, shoes and slippers made at factories in each State are shown for 1947-48 in the following table. Particulars relating to the output of rubber boots and shoes are not included :—

BOOT AND SHOE (NOT RUBBER) FACTORIES : OUTPUT, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
QUANTITY.							
Boots and shoes .. pairs	5,634,230	7,804,988	935,047	1,149,311	587,175	91,830	16,202,581
Slippers .. "	3,143,341	4,749,785	822,577	153,041	426,880	..	9,295,624
Uppers (b) .. "	11,625	237,075	(a)	(a)	(a)	..	252,682
VALUE.							
Boots and shoes .. £	5,148,867	6,908,202	749,122	907,075	288,171	79,909	14,081,346
Slippers .. £	819,260	1,346,660	225,200	37,543	132,511	..	2,561,174
Uppers (b) .. £	7,532	62,682	(a)	(a)	(a)	..	73,611

(a) Not available for publication ; figures are included in total for Australia.

(b) Made for other than factory use.

22. **Flour-milling.**—(i) *Details for States.* The following table shows the position of the grain-milling industry in each State for the year 1947-48.

FLOUR-MILLING, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	56	39	10	33	20	9	167
Number of persons engaged ..	1,674	1,260	401	607	526	155	4,623
Value of land and buildings £	991,769	715,429	197,492	267,493	250,555	82,458	2,505,196
Value of plant and machinery £	841,746	547,261	153,843	210,159	254,038	26,731	2,033,778
Salaries and wages paid £	701,324	517,704	145,747	240,422	224,105	55,733	1,885,035
Value of power, fuel, etc., used £	124,699	100,317	25,273	55,263	53,083	6,412	365,047
Value of materials used £	8,820,079	6,942,700	1,542,332	3,193,133	2,995,055	549,761	24,043,060
Total value of output £	10,489,850	8,015,452	1,928,302	3,611,307	3,439,428	628,577	28,112,916
Value of production ..	£ 1,545,072	972,435	360,697	362,911	391,290	72,404	3,704,809

(ii) *Production of Flour and By-products.* The production of flour by the mills in each State for the years 1938-39 and 1943-44 to 1947-48 was as follows :—

FLOUR-MILLING : PRODUCTION OF FLOUR.

(Tons of 2,000 lb.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39 ..	547,162	436,829	84,314	146,262	138,583	19,582	1,372,732
1943-44 ..	496,853	409,190	125,603	149,892	159,799	17,153	1,358,490
1944-45 ..	516,168	393,036	124,473	194,067	161,690	22,534	1,412,868
1945-46 ..	451,895	315,525	90,984	164,986	166,791	22,157	1,218,838
1946-47 ..	541,469	449,170	98,232	202,366	176,727	21,695	1,489,659
1947-48 ..	552,784	501,325	108,022	215,155	197,104	23,753	1,598,143

The 1947-48 production of 1,598,143 tons of flour in Australia was valued at £21,979,405. In addition, 634,403 tons of bran and pollard, valued at £4,655,641, were made. The quantity of wheat ground was 76,926,847 bushels.

23. *Bakeries.*—Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on in the year 1947-48 is given in the table below. It should be noted, however, that the details refer only to establishments coming within the definition of a factory, as explained in § 1, par. 1, page 1092. For that reason there is a large number of bakehouses omitted, and consequently the table does not give complete details of the industry. This is true of all other industries covered by the statistics of manufacturing production, but, in view of the omission of such a large number of establishments in this instance, special mention is deemed necessary.

BAKERIES (INCLUDING CAKES AND PASTRY), 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia.
Number of factories ..	1,107	824	385	194	218	103	2,831
Number of persons engaged ..	6,597	4,473	2,386	1,231	805	1,322	16,814
Value of land and buildings £	3,710,801	2,055,706	610,510	101,135	333,100	388,805	7,524,933
Value of plant and machinery £	1,070,067	654,026	304,906	243,910	116,631	185,704	2,575,253
Salaries and wages paid £	1,800,734	1,179,604	573,516	355,707	183,354	367,430	4,460,435
Value of power, fuel, etc., used £	274,571	178,367	84,955	55,846	33,690	37,733	665,162
Value of materials used £	5,268,933	3,701,301	1,926,253	1,084,047	651,111	1,292,268	13,923,913
Total value of output £	9,225,808	6,324,892	3,263,834	1,806,005	1,094,280	1,940,605	23,656,024
Value of production ..	£ 3,682,304	2,445,224	1,252,626	666,712	409,479	610,604	9,066,949

(a) Includes confectionery.

24. *Sugar-mills.*—(i) *General.* Sugar-cane is grown in New South Wales and Queensland and particulars of area, yield, etc., are given in extended detail in Chapter XX. "Agricultural Production".

The products of the sugar-mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Particulars of cane crushed and sugar produced embodied in the following two tables refer to the quantities treated during the years ended 30th June, irrespective of the season in which the cane was grown; consequently the figures relating to cane crushed and sugar produced may differ slightly from those given in Chapter XX.—"Agricultural Production", which relate to harvest years.

(ii) *Details for New South Wales.* The following table gives details of the operations of sugar mills in New South Wales for the year 1938-39, and each year 1944-45 to 1947-48 :—

SUGAR-MILLS : NEW SOUTH WALES.

Items.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories	3	3	3	3	3
Number of employees	212	248	283	297	236
Cane crushed tons	337,038	200,050	166,069	309,655	267,261
Raw sugar produced (94 net titre) tons	45,106	26,423	21,220	39,768	33,560
Molasses produced gals.	1,489,090	1,037,600	1,110,000	1,281,920	(a)

(a) Not available for publication.

(iii) *Details for Queensland.* Particulars relating to the operations of sugar-mills in Queensland are shown in the following table for the year 1938-39 and each year 1944-45 to 1947-48. Particulars of the seasonal distribution of molasses as recorded by the mills are also shown.

SUGAR-MILLS : QUEENSLAND.

Items.	1938-39.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories	33	32	32	31	32
Number of persons engaged	4,419	4,276	4,665	4,205	4,762
Cane crushed tons	5,432,193	4,398,268	4,551,971	3,717,330	4,150,986
Raw sugar produced (94 net titre)	775,064	643,520	644,661	512,086	571,694
Molasses—					
Sold to distillers and others gals.	8,275,887	9,136,862	9,380,679	10,691,581	8,256,892
Used as fodder	4,237,196	4,719,517	4,675,909	6,932,902	5,320,970
Used as manure	3,293,543	2,745,617	3,074,755	2,899,167	3,558,155
Run to waste	495,926	16,660	50,902	63,466	15,035
Burnt as fuel	3,748,590	2,251,737	1,748,299	954,970	1,427,775
Sold or used for other purposes	232,049	254,358	423,085	241,045	312,930
Total molasses disposed of	20,286,191	19,124,751	19,353,629	21,783,131	18,891,757

25. *Sugar Refineries.*—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated on in the earlier years coming chiefly from Mauritius and the East. In 1947-48 there were two sugar refineries in the States of Victoria and Queensland, and one in each of the States of New South Wales, South Australia and Western Australia. The quantity of raw sugar treated amounted to 452,468 tons, for a yield of 435,584 tons of refined sugar, valued at £14,715,758.

26. *Confectionery Factories.*—(i) *Details for each State.* The figures for 1947-48 are given hereunder:—

SUGAR CONFECTIONERY FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australi. (b)
Number of factories	98	86	22	23	13	(a)	242
Number of persons engaged	3,084	2,718	441	427	391	(a)	7,061
Value of land and buildings £	870,392	550,078	96,912	111,660	80,530	(a)	1,709,572
Value of plant and machinery £	707,621	551,303	33,739	37,284	63,159	(a)	1,393,106
Salaries and wages paid £	918,302	794,842	90,682	98,627	75,517	(a)	1,978,030
Value of power, fuel, etc., used £	75,468	78,711	6,080	10,128	9,248	(a)	179,635
Value of materials used £	3,456,409	2,321,198	263,597	255,561	327,368	(a)	6,624,193
Total value of output £	5,594,325	4,075,657	545,400	422,028	490,985	(a)	11,128,404
Value of production £	2,062,388	1,675,748	275,732	156,339	154,369	(a)	4,324,576

(a) Not available for publication.

(b) Excludes Tasmania.

(ii) *Total for Australia, excluding Tasmania.* Particulars of the confectionery industry during the last five years are compared with 1938-39 in the following table. Confectionery establishments in Tasmania have been combined with bakeries in order to conceal confidential information. Production in Australia is more than sufficient to supply local requirements.

SUGAR CONFECTIONERY FACTORIES(a) : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	148	163	182	198	237	242
Number of persons engaged ..	7,256	5,706	5,795	5,965	6,574	7,061
Value of land and buildings £	1,423,406	1,451,329	1,480,439	1,556,321	1,640,081	1,709,572
Value of plant and machinery £	1,363,619	1,194,194	1,160,005	1,142,484	1,195,007	1,393,106
Salaries and wages paid £	1,040,984	1,258,561	1,208,281	1,389,479	1,660,411	1,978,030
Value of power, fuel, etc., used £	106,866	129,175	134,914	138,312	160,280	179,635
Value of materials used £	3,101,955	4,305,338	4,504,124	4,668,928	5,436,640	6,624,193
Total value of output £	5,627,247	7,642,694	7,933,135	8,121,623	9,281,800	11,128,404
Value of production .. £	2,418,423	3,208,181	3,294,097	3,314,183	3,684,880	4,324,576

(a) Excludes Tasmania.

27. *Jam, Fruit and Vegetable Canning, Pickles, Sauces, Vinegar Factories.*—
(i) *Details for each State.* The following table gives particulars of factories included in this class for 1947-48 :—

JAM, FRUIT AND VEGETABLE CANNING, PICKLES, ETC., FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	62	52	17	14	14	18	177
Number of persons engaged ..	3,323	4,368	845	1,003	258	1,264	11,061
Value of land and buildings £	801,467	1,092,770	256,949	231,428	65,560	313,816	2,761,990
Value of plant and machinery £	680,418	1,007,063	262,433	138,494	52,201	192,066	2,332,675
Salaries and wages paid £	1,125,109	1,465,018	257,902	297,548	59,902	446,534	3,652,763
Value of power, fuel, etc., used £	89,382	116,342	17,398	23,077	5,263	32,784	284,246
Value of materials used £	4,305,891	6,354,338	1,212,543	862,858	175,068	1,504,104	14,475,492
Total value of output £	6,508,245	9,614,490	1,680,933	1,322,182	272,914	1,189,609	21,588,403
Value of production .. £	2,052,972	3,143,810	450,992	436,247	92,011	652,721	6,828,755

(ii) *Total for Australia.* Particulars of these establishments in Australia for the five years 1943-44 to 1947-48 compared with 1938-39 are given hereunder :—

JAM, FRUIT AND VEGETABLE CANNING, PICKLES, ETC., FACTORIES : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	123	152	168	157	170	177
Number of persons engaged ..	6,476	11,416	12,858	11,403	10,700	11,061
Value of land and buildings £	1,382,150	2,055,850	2,409,005	2,183,654	2,406,588	2,761,990
Value of plant and machinery £	720,639	1,105,954	1,652,407	1,629,979	1,870,378	2,334,075
Salaries and wages paid £	1,148,991	2,740,715	3,065,087	2,947,366	3,018,713	3,652,763
Value of power, fuel, etc., used £	97,521	269,996	327,558	260,079	252,046	284,246
Value of materials used £	4,799,515	11,886,635	13,141,842	12,325,758	12,224,225	14,475,402
Total value of output £	7,230,914	16,985,506	19,169,509	17,664,531	18,291,803	21,588,403
Value of production .. £	2,333,878	4,828,875	5,700,109	5,078,694	5,845,532	6,828,755

During the 1939-45 War production of jams and jellies expanded greatly and a high level of output of 171 million lb. was attained in 1943-44. Production afterwards receded but attained a new record of 198 million lb. in 1947-48. The peak output of fruit preserved in liquid also occurred in 1947-48 with 176,273,000 lb., compared with the previous highest level of 161.1 million lb. attained in 1940-41

There has also been a marked development in the production of canned vegetables. In 1938-39 output totalled 10,255,000 lb. but, as a result of the war-time demand by the armed services, production reached the record level of 119,149,000 lb. in 1944-45. However, it has since declined to 46,331,000 lb. in 1947-48.

(iii) *Production.* The following table shows the quantity and value of jams, pickles, sauces and other items manufactured in each State in 1947-48 :—

JAMS, PRESERVED FRUIT AND VEGETABLES, PICKLES AND SAUCES : OUTPUT, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
QUANTITY.							
Jams and Jellies .. '000 lb.	58,978	(a) 106,669	14,215	15,790	2,802	(b)	198,454
Fruit Pulp—							
Consumed in own works .. cwt.	53,478	39,764	2,411	18,738	30,740	48,131	193,262
For sale or addition to stock .. cwt.	32,845	88,342	(c)	20,304	(c)	553,375	745,919
Tomato Pulp—							
Consumed in own works .. cwt.	43,602	114,717	(c)	24,907	(c)	(c)	200,974
For sale or addition to stock .. cwt.	42,943	318,781	..	12,534	(c)	(c)	392,718
Fruit, preserved in liquid '000 lb.	30,057	103,468	24,235	14,030	(c)	(c)	176,273
Vegetables, preserved in liquid .. '000 lb.	25,480	12,903	(c)	(c)	(c)	(c)	46,331
Pickles .. '000 pints	3,750	2,724	(c)	1,800	(c) 365	(c)	8,775
Sauces .. " "	11,544	13,651	1,308	3,118	(c)	(c)	30,728

VALUE (£).

Jams and Jellies	2,079,808	43,354,752	507,242	480,823	84,970	(b)	6,507,595
Fruit, preserved in liquid ..	1,122,203	3,211,062	827,647	364,026	(c)	(c)	5,070,700
Vegetables, preserved in liquid	1,282,431	531,980	(c)	(c)	(c)	(c)	2,153,142
Pickles	227,517	127,684	(c)	100,179	19,123	(c)	483,909
Sauces	764,053	736,501	53,158	140,835	(c)	(c)	1,747,061

(a) Includes Tasmania. (b) Included with Victoria. (c) Not available for publication; figures are included in total for Australia.

28. **Bacon-curing Factories.**—(i) *Details for each State.* The table hereunder gives particulars of factories engaged in bacon-curing in each State for 1947-48 :—

BACON-CURING FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	34	20	8	12	6	10	90
Number of persons engaged ..	573	729	763	319	309	67	2,760
Value of land and buildings £	272,619	251,883	230,557	118,927	57,468	28,797	960,251
Value of plant and machinery £	101,112	111,637	144,810	58,611	11,711	9,110	439,333
Salaries and wages paid £	218,219	259,373	265,748	113,086	103,726	21,842	972,994
Value of power, fuel, etc., used £	28,411	39,146	29,643	22,617	11,619	2,863	137,241
Value of materials used £	2,194,212	2,161,720	2,482,979	1,176,825	1,207,674	268,406	9,401,816
Total value of output £	2,637,374	2,720,995	2,872,550	1,312,361	1,371,450	317,846	11,232,576
Value of production	414,751	523,127	359,928	112,919	146,157	46,637	1,603,519

(ii) *Quantity and Value of Production.* The number of pigs cured and the quantity and value of production of factories in each State for 1947-48 are shown in the following table :—

BACON-CURING FACTORIES : PIGS CURED AND PRODUCTION, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
PIGS CURED.							
Pigs cured on own account ..	217,287	231,645	234,177	107,116	91,639	26,175	908,039
Pigs cured on commission ..	26,228	2,950	(b)	358	263	(b)	30,468
Total	243,515	234,595	(b)	107,474	91,902	(b)	938,507
PRODUCTS (TONS).							
Bacon and ham	14,113	11,086	9,671	4,644	4,232	1,275	45,021
Lard	426	617	895	256	278	90	2,562
VALUE (£).							
Bacon and ham (a)	1,791,602	2,023,052	1,569,467	795,671	688,310	208,775	7,076,877
Lard	33,878	59,725	82,306	18,232	23,111	6,620	223,872

(a) Partly estimated.

(b) Not available for publication ; figures are included in total for Australia.

Bacon and ham and other pig products are dealt with more fully in Chapter XXI.—“ Farmyard, Dairy and Bee Products ”.

29. *Butter, Cheese and Condensed Milk Factories.*—(i) *Details for each State.* The following table gives particulars of butter, cheese and condensed milk factories in each State for 1947-48 :—

BUTTER, CHEESE AND CONDENSED MILK FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	107	148	101	46	18	29	449
Number of persons engaged ..	2,060	4,446	1,575	927	307	318	9,612
Value of land and buildings £	1,021,874	1,730,366	777,483	287,810	103,095	152,305	4,072,933
Value of plant and machinery £	1,211,336	1,530,640	884,594	260,987	145,014	123,844	4,156,415
Salaries and wages paid £	771,663	1,755,797	531,895	319,253	104,066	95,346	3,578,020
Value of power, fuel, etc., used £	217,852	415,156	120,975	60,994	30,083	22,939	873,999
Value of materials used £	8,440,175	17,212,792	12,953,786	3,162,555	1,550,207	1,099,803	44,419,318
Total value of output £	10,065,655	21,346,980	13,879,391	3,933,001	1,833,790	1,344,128	52,402,951
Value of production .. £	1,407,628	3,719,032	804,030	703,452	253,506	221,886	7,109,634

(ii) *Total for Australia.* The progress of industries included in this group during the five years 1943-44 to 1947-48 is compared with 1938-39 in the following table :—

BUTTER, CHEESE AND CONDENSED MILK FACTORIES : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	523	472	469	462	460	449
Number of persons engaged ..	6,851	8,712	8,694	8,896	9,223	9,642
Value of land and buildings £	2,880,323	3,360,498	3,429,238	3,506,020	3,680,495	4,072,933
Value of plant and machinery £	3,066,840	3,499,065	3,487,600	3,597,366	3,090,273	4,156,415
Salaries and wages paid £	1,569,531	2,526,017	2,566,477	2,737,217	3,014,595	3,578,020
Value of power, fuel, etc., used £	389,501	708,211	701,016	755,755	781,736	873,999
Value of materials used £	29,161,083	35,300,830	31,535,021	34,990,910	33,119,349	44,419,318
Total value of output £	33,094,851	40,703,304	37,100,708	40,771,127	42,134,803	52,402,951
Value of production .. £	3,543,367	4,694,263	4,864,671	5,024,462	5,733,518	7,109,634

(iii) *Quantity and Value of Production.* The next table shows the quantities and values of butter, cheese and condensed milk produced and the quantities of milk used in their production during 1947-48. These details are restricted to factory production and therefore exclude farm output.

BUTTER, CHEESE AND CONDENSED MILK FACTORIES: PRODUCTION, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
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MILK USED ('000 GALLONS).

For the manufacture of—							
Butter	157,838	260,022	210,593	40,159	32,054	22,862	723,528
Cheese	5,963	34,761	21,536	24,514	2,253	1,013	90,040
Condensed, Dried and other Milk Products (incl. Ice Cream)(b) ..	20,380	51,328	(a)	3,000	(a)	(a)	78,311

PRODUCTS (TONS).

Butter	33,958	56,717	46,454	9,043	6,974	4,441	157,587
Cheese	2,637	16,167	(c) 9,641	11,530	1,019	447	41,441
Condensed and concentrated milk	11,377	38,368	(a)	(a)	(a)	..	59,039
Powdered milk	4,528	15,426	(a)	(a)	..	(a)	20,394

VALUE (£'000).

Butter	7,003	11,767	9,558	1,931	1,380	920	32,559
Cheese	371	1,950	(c) 1,150	1,378	126	51	5,026
Condensed and concentrated milk	641	2,880	(a)	(a)	(a)	..	4,415
Powdered milk	780	1,902	(a)	(a)	..	(a)	2,725

(a) Not available for publication; figures are included in total for Australia. (b) Includes Whole Milk equivalent of cream and butter fat purchased as such. (c) Includes 181 tons of cheese, valued at £18,902, made in establishments not classified as factories.

The butter, cheese and condensed milk industries are dealt with more fully in Chapter XXI.—“Farmyard, Dairy and Bee Products”

30. **Meat and Fish Preserving Works.**—The industries included in this group are engaged chiefly in the freezing and preserving of meat. Works have been established at the seaports for the purpose of handling beef, lamb and mutton for export, and insulated space for the carriage of chilled and frozen produce is provided by shipping companies trading between Australia and other parts of the world. The substitution of chilled for frozen meat exported has already been referred to in Chapter XIX.—“Pastoral Production”. In recent years there has been considerable expansion in the canning of meat and fish.

MEAT AND FISH PRESERVING WORKS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	8	16	20	16	12	9	81
Number of persons engaged ..	668	1,077	5,112	314	444	268	7,883
Value of land and buildings £	141,994	351,780	1,078,043	68,135	449,135	94,822	2,783,915
Value of plant and machinery £	119,081	178,011	852,436	52,484	452,245	51,704	1,705,961
Salaries and wages paid £	224,830	387,587	2,269,243	91,823	169,913	88,710	3,232,106
Value of power, fuel, etc., used £	27,801	17,760	119,317	9,110	22,735	6,180	152,955
Value of materials used £	1,147,277	2,357,266	12,729,504	504,836	602,180	261,017	17,722,080
Total value of output £	1,541,008	3,102,117	13,091,100	720,930	907,170	101,035	22,850,930
Value of production .. £	366,470	767,161	3,015,329	146,948	282,555	197,432	4,775,895

Particulars of the quantities and values of beef, mutton and lamb preserved by cold process exported from Australia over a series of years will be found in Chapter XIX.—“Pastoral Production”.

31. **Breweries.**—(i) *Details for each State.* The following table gives particulars of breweries in each State for the year 1947-48. It should be noted, however, that the data shown below are not strictly comparable throughout, owing to the inability or failure of some breweries to furnish a separate return for each branch of activity. Consequently the figures for some States include details of employment, wages, output, etc., not connected with the brewing of beer, although associated with it. These extraneous activities include cooperage, malt works, aerated waters, etc.

BREWERIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	6	7	6	5	6	2	32
Number of persons engaged ..	1,428	1,651	493	(a)	479	(a)	4,677
Value of land and buildings £	1,218,374	708,287	524,664	(a)	267,614	(a)	3,241,603
Value of plant and machinery £	676,834	881,287	339,177	(a)	200,558	(a)	2,795,685
Salaries and wages paid £	600,586	759,332	202,473	(a)	216,631	(a)	2,029,578
Value of power, fuel, etc., used £	164,635	110,950	52,115	(a)	54,886	(a)	452,699
Value of materials used £	1,620,076	1,654,331	484,600	(a)	607,983	(a)	5,108,560
Total value of output (b) £	4,405,365	3,156,136	1,404,867	(a)	1,472,925	(a)	11,954,243
Value of production ..	£ 2,620,654	£ 1,390,855	858,152	(a)	810,056	(a)	6,392,894

(a) Not available for publication; figures are included in total for Australia. (b) Excludes Excise Duty.

(ii) *Total for Australia.* The next table shows the extent of this industry for 1938-39 and the five years 1943-44 to 1947-48 :—

BREWERIES : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46	1946-47.	1947-48.
Number of factories ..	34	33	33	33	33	32
Number of persons engaged ..	3,698	3,873	3,919	4,121	4,516	4,677
Value of land and buildings £	2,801,147	3,196,938	3,188,239	3,185,582	3,215,403	3,241,603
Value of plant and machinery £	2,737,042	2,595,508	2,458,703	2,484,442	2,617,866	2,795,685
Salaries and wages paid £	1,215,473	1,444,363	1,406,658	1,586,366	1,805,196	2,029,578
Value of power, fuel, etc., used £	251,286	339,182	338,913	351,184	425,596	452,699
Value of materials used £	3,406,572	4,015,503	4,142,863	4,255,684	4,998,158	5,108,560
Total value of output £	9,030,309	9,969,828	10,151,935	10,476,340	12,267,499	11,954,243
Value of production £	5,372,451	5,614,843	5,670,159	5,869,472	6,843,745	6,392,894

The quantity of ale, stout and beer brewed fell from 73.7 million gallons in 1928-29 to 49.8 million gallons in 1931-32, but thereafter increased each year to 109.2 million gallons in 1941-42. Under the Control of Liquor Order which operated between March, 1942 and March, 1946, the production of beer was restricted and consequently output remained static at about 100 million gallons from 1942-43 to 1944-45. Production rose to 125 million gallons in 1947-48 and to 148 million gallons in 1948-49.

The average annual consumption of ale, stout and beer prior to the economic depression of the early thirties exceeded 111 gallons per head of the population : it dropped to 7.32 gallons in 1931-32, increased to 13.76 gallons in 1941-42 and declined again to about 13 gallons during the period of control. In 1947-48 the consumption per head increased to 15.47 gallons.

(iii) *Materials Used and Production.* The table below shows the quantities of raw materials used and the quantity and value of ale, stout and beer brewed in each State during 1947-48 :—

BREWERIES : MATERIALS USED AND PRODUCTION, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Malt .. bushels	1,298,607	1,230,794	412,401	394,850	(b)	(b)	3,920,802
Hops .. lb.	99,970	921,979	309,580	341,351	(b)	(b)	2,805,555
Sugar .. cwt.	190,740	142,920	53,840	40,960	(b)	(b)	466,780

RAW MATERIALS USED PER 1,000 GALLONS OF ALE, STOUT AND BEER PRODUCED.

Malt .. bushels	28.46	31.46	29.46	35.76	36.19	41.65	31.37
Hops .. lb.	19.71	23.57	22.72	30.92	21.26	20.96	22.42
Sugar .. cwt.	4.41	3.65	3.95	3.71	2.49	2.25	3.73

ALE, STOUT AND BEER BREWED.

Quantity .. gallons	45,626,466	39,123,475	13,624,672	11,040,366	(b)	(b)	125,158,216
Value (a) .. £	4,420,731	3,128,793	1,399,664	1,145,486	(b)	(b)	11,732,943

(a) Excludes Excise Duty. Australia.

(b) Not available for publication; figures are included in total for

32. **Distilleries.**—Distilleries are located in all the States except Tasmania. The following table, which has been compiled from returns of the Excise Branch of the Department of Trade and Customs, shows the materials used in distilleries in Australia and the quantity of spirits distilled therefrom for the years 1943-44 to 1947-48 compared with the year 1938-39.

DISTILLERIES : AUSTRALIA.

Particulars.	Unit of Quantity.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
PRINCIPAL MATERIALS USED.							
Barley Malt	bus.	89,528	240,386	245,306	206,002	349,070	340,000
Barley .. ..	..	80,548	170,954	145,993	208,847	263,460	172,644
Wheat .. ..	..	..	706,712	683,350	108,590	90,503	16,497
Malted Wheat .. ..	..	..	11,495	14,209	46,912	27,190	27,900
Maize .. ..	..	7,643	18,208	55,625	58,688	15,532	52,640
Molasses	cwt.	1,405,271	1,086,747	1,158,870	1,158,439	1,808,517	1,849,988
Sugar .. ..	..	..	1,078,714	477,906	522,982	86,433	44,655
Sugar Syrup .. ..	..	..	321,183	268,509	240,216	100,294	91,204
Wine	gal.	11,364,208	12,631,059	10,420,236	15,749,146	19,804,405	18,916,227
Raisins	cwt.	19,521	15,031	44,455	14,477	47,386	30,690

SPIRITS DISTILLED (PROOF GALLONS).

From—							
Barley and other Grain							
Malt .. ..	..	434,578	3,710,810	3,778,128	1,836,659	1,978,708	1,782,439
Molasses and Sugar .. ..	..	7,025,416	18,566,633	12,463,738	11,842,105	10,959,334	10,672,356
Wine and Wine Lees .. ..	..	2,249,265	2,365,028	1,872,633	2,879,030	3,440,071	3,983,384
Other .. ..	..	7305	76,394	158,079	105,117	143,971	270,978
Total .. ..	..	9,716,564	24,718,775	18,272,578	16,662,911	16,522,084	16,709,157
Spirits denatured .. ..	..	4,553,152	18,391,976	12,219,648	8,780,290	8,288,830	7,819,271

33. **Tobacco, etc., Factories.**—(i) *Details for each State.* During 1947-48 there were 33 establishments in which the manufacture of tobacco, cigars or cigarettes was carried on. There are no such factories in Tasmania.

TOBACCO, CIGAR AND CIGARETTE FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Australia.
Number of factories	12	15	4	1	1	33
Number of persons engaged	2,986	2,282	(a)	(a)	(a)	5,470
Value of land and buildings £	702,363	412,238	(a)	(a)	(a)	1,143,303
Value of plant and machinery £	503,446	407,404	(a)	(a)	(a)	932,616
Salaries and wages paid £	936,463	692,398	(a)	(a)	(a)	1,676,954
Value of power, fuel, etc., used £	37,893	22,876	(a)	(a)	(a)	62,339
Value of materials used £	9,295,718	5,005,656	(a)	(a)	(a)	14,492,198
Total value of output £	11,061,168	6,622,395	(a)	(a)	(a)	17,915,412
Value of production	1,727,557	1,533,863	(a)	(a)	(a)	3,360,875

(a) Not available for publication; figures are included in total for Australia.

(ii) *Total for Australia.* This industry was among the first to be established in Australia. In 1861 New South Wales had eleven factories and Victoria one. The Australian market has for many years been largely supplied with local manufactures from the imported leaf. Imports during 1947-48 comprised—manufactured tobacco 517,036 lb., cigars 22,140 lb., and cigarettes 2,847,035 lb., and the quantities manufactured in

Australian factories were respectively 19,715,000 lb., 163,000 lb., and 10,147,000 lb. The following tables show the extent of the industry in Australia for the five years 1943-44 to 1947-48 compared with 1938-39:—

TOBACCO, CIGAR AND CIGARETTE FACTORIES: AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	30	25	25	26	31	33
Number of employees ..	5,544	5,112	5,203	5,255	5,641	5,470
Value of land and buildings £	1,041,798	968,985	952,066	959,192	1,159,772	1,143,303
Value of plant and machinery £	942,644	789,755	752,361	723,962	840,171	932,616
Salaries and wages paid £	1,095,912	1,243,646	1,230,863	1,300,481	1,536,796	1,676,954
Value of power, fuel, etc., used £	34,483	44,366	44,389	52,174	61,127	62,339
Value of materials used £	7,080,574	10,087,241	10,436,032	10,602,034	13,657,489	14,492,198
Total value of output £	9,800,413	12,934,104	12,851,221	13,042,558	16,364,165	17,915,412
Value of production ..	£ 2,685,356	2,802,497	2,370,800	2,388,349	2,645,549	3,360,875

LEAF USED AND PRODUCTION ('000 lb.).

Leaf used —						
Australian (stemmed) ..	4,489	4,951	4,658	4,685	3,611	2,924
Imported (stemmed) ..	16,011	19,202	18,704	18,822	23,441	23,675
Tobacco made ..	16,305	18,187	17,448	17,901	20,190	19,715
Cigars made ..	238	134	122	125	139	103
Cigarettes made ..	6,731	8,929	8,740	8,482	10,082	10,147

For many years the production of locally-grown leaf was comparatively small, and manufacturers were dependent on imported leaf for the supply of their raw material. Increased import duties stimulated local production, and the quantity of Australian leaf used by manufacturers rose from 1.2 million lb. in 1929-30 to over 3 million lb. in 1930-31. During the 1939-45 War about 4.7 million lb. of Australian-grown leaf was used annually but in subsequent years the figure fell to the 1947-48 level of 2.9 million lb. In this connexion, see Chapter XX.—“Agricultural Production”.

34. **Sawmills, etc.**—(i) *Details for States.* The most important industry in Class X. is that of sawmilling. Because of difficulties associated with the classifying of sawmills into forest and town, they have been combined in the following tables, together with plywood and bark mills.

SAWMILLS, PLYWOOD AND BARK MILLS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	844	465	408	75	161	288	2,241
Number of persons engaged ..	8,834	5,577	6,047	1,711	2,639	2,103	27,811
Value of land and buildings £	1,363,427	704,707	504,714	319,092	236,763	141,914	3,291,577
Value of plant and machinery £	1,366,275	1,000,166	882,101	323,310	430,901	437,411	4,077,370
Salaries and wages paid £	2,768,536	1,741,359	2,065,475	567,441	793,098	601,142	8,537,051
Value of power, fuel, etc., used £	175,347	144,053	101,583	20,022	07,052	41,114	534,171
Value of materials used £	7,347,006	8,852,181	3,548,311	1,861,790	1,223,739	1,102,039	19,971,233
Total value of output £	12,336,528	8,212,213	6,896,065	2,846,343	2,545,173	2,121,139	34,958,061
Value of production ..	£ 4,813,025	3,238,379	3,240,251	957,631	1,249,382	917,389	14,452,657

(ii) *Total for Australia.* Comparative statistics for 1938-39 and 1943-44 to 1947-48 are shown in the following table:—

SAWMILLS, PLYWOOD AND BARK MILLS: AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	1,660	1,622	1,645	1,765	1,906	2,241
Number of persons engaged ..	19,104	23,023	20,608	22,591	25,723	27,811
Value of land and buildings £	2,054,611	2,163,399	2,256,446	2,523,249	2,840,407	3,291,577
Value of plant and machinery £	2,785,716	3,162,761	3,165,992	3,460,945	4,079,910	4,077,370
Salaries and wages paid £	3,634,627	5,087,183	5,315,207	5,841,968	7,119,598	8,537,051
Value of power, fuel, etc., used £	225,782	325,212	344,560	375,437	449,405	534,171
Value of materials used £	8,522,895	10,871,168	11,016,417	12,174,016	16,000,148	19,071,233
Total value of output £	14,137,888	19,278,114	20,033,902	21,707,972	27,889,108	34,958,061
Value of production ..	£ 5,789,211	8,081,734	8,672,925	9,158,519	11,438,555	14,452,657

The sawmill output of native timber, which declined from 740 million super. feet in 1925-26 to the abnormally low figure of 237 million super. feet during the depth of the depression, recovered to 717 million super. feet in 1938-39 and stood at 1,117 million super. feet in 1947-48. Further reference is made to the sawmilling industry in Chapter XXII.—“Forestry”.

35. Cabinet and Furniture Making and Upholstery Factories.—These industries constitute the principal manufactures in Class XI. The following table gives particulars for each State in 1947-48 :—

CABINET AND FURNITURE MAKING AND UPHOLSTERY FACTORIES, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	392	394	148	105	141	55	1,235
Number of persons engaged ..	5,039	4,028	2,244	1,448	1,115	558	14,432
Value of land and buildings £	1,121,997	983,765	330,239	238,373	220,411	89,385	2,984,170
Value of plant and machinery £	339,103	276,043	115,868	94,231	90,015	27,649	942,909
Salaries and wages paid £	1,626,405	1,184,661	639,450	414,654	275,932	133,780	4,274,891
Value of power, fuel, etc., used£	38,308	26,191	13,070	10,880	5,225	2,578	90,315
Value of materials used £	2,910,388	1,955,479	980,132	735,465	520,138	157,013	7,207,513
Total value of output £	5,472,077	4,070,345	1,970,485	1,398,384	1,009,483	304,618	11,285,391
Value of production ..	£ 2,523,421	2,088,872	968,283	652,039	484,119	205,027	6,921,761

36. Printing Works.—Printing and bookbinding works rank high in importance among the industries of Australia, and in 1947-48 afforded employment for about 31,000 employees, and paid nearly £10,914,000 in salaries and wages, while the value of output amounted to £34,141,000. The first table below gives particulars of establishments engaged in general printing in each State for 1947-48. These establishments include those engaged in lithographic printing, bookbinding, paper ruling and linotyping and Government printing works. Establishments producing newspapers and periodicals are shown separately in the second table to follow :—

GOVERNMENT AND GENERAL PRINTING WORKS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	389	396	89	66	68	18	1,026
Number of persons engaged ..	8,126	6,944	2,225	1,389	1,121	540	20,345
Value of land and buildings £	1,797,786	1,790,022	383,927	263,987	234,002	136,122	4,605,846
Value of plant and machinery £	1,459,486	1,158,304	220,336	248,316	154,949	80,672	3,322,063
Salaries and wages paid £	2,734,338	2,309,516	623,186	419,025	310,268	179,750	6,573,089
Value of power, fuel, etc., used£	58,216	54,464	13,998	9,796	7,523	3,563	147,560
Value of materials used £	3,742,371	3,445,530	826,567	447,269	430,248	174,001	9,052,006
Total value of output £	8,357,508	7,058,202	1,849,683	1,120,180	995,107	450,257	19,830,931
Value of production ..	£ 4,576,921	3,558,208	1,009,118	663,115	551,336	271,773	10,630,471

NEWSPAPERS AND PERIODICALS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories ..	182	118	55	35	32	7	429
Number of persons engaged ..	5,271	2,655	1,470	780	598	269	11,043
Value of land and buildings £	1,907,928	792,716	501,031	344,318	258,490	46,535	3,845,013
Value of plant and machinery £	1,575,584	535,178	321,188	168,582	115,021	75,321	2,799,874
Salaries and wages paid £	2,090,753	1,004,051	534,799	297,130	241,430	111,713	4,310,505
Value of power, fuel, etc., used£	74,799	36,273	24,380	10,224	11,300	3,894	160,870
Value of materials used £	3,423,374	1,811,780	667,587	376,190	285,000	85,132	6,610,681
Total value of output £	7,281,812	3,567,926	1,576,815	891,719	699,860	291,903	14,310,035
Value of production ..	£ 3,783,639	1,719,864	884,848	505,296	402,960	202,877	7,499,484

37. **Paper Making.**—Although the paper manufacturing industry has been established in Australia for many years it was not until the manufacture of paper pulp from indigenous timber commenced in 1938-39 that any marked development occurred.

Plants producing pulp from eucalypt timber are operating in Victoria and Tasmania whilst in South Australia pulp is being produced from locally-grown softwoods. The production of pulp rose from 6,000 tons in 1938-39 to 88,000 tons in 1946-47, and then dropped slightly to 86,000 tons in 1947-48.

The number of factories operating in 1947-48 comprised two in New South Wales, five in Victoria, one in Queensland, South Australia and Western Australia and two in Tasmania. In the latter State, newsprint, writing and printing papers are produced and in the other States wrappings, other papers and boards. Particulars for this industry are given in the following table for the years 1938-39 and 1943-44 to 1947-48.

PAPER MAKING, INCLUDING PULP MILLS : AUSTRALIA.

Items.	1938-39.	1943-44.	1944-45.	1945-46.	1946-47.	1947-48.
Number of factories ..	7	12	12	12	12	12
Number of persons engaged ..	1,961	4,758	4,625	4,705	5,078	5,210
Value of land and buildings ..	849,578	1,491,348	1,521,419	1,525,187	1,659,960	1,832,994
Value of plant and machinery ..	1,712,662	3,178,251	2,920,885	2,509,426	2,923,957	3,584,740
Salaries and wages paid ..	466,548	1,526,609	1,525,871	1,577,146	1,933,049	2,350,435
Value of power, fuel, etc., used ..	200,998	586,710	596,399	598,979	782,038	849,308
Value of materials used ..	1,095,318	4,047,788	4,081,491	3,802,202	4,056,766	4,978,685
Total value of output ..	2,301,531	7,954,232	8,094,486	7,417,772	8,656,231	10,258,026
Value of production ..	1,005,215	3,319,734	3,416,596	3,016,588	3,817,427	4,430,033

38. **Rubber Goods (Including Tyres made).**—The following table gives particulars of this industry for each State during 1947-48 :—

RUBBER GOODS (INCLUDING TYRES MADE), 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	22	32	4	7	2	..	67
Number of persons engaged ..	4,422	3,700	532	296	8	..	9,048
Value of land and buildings ..	685,173	641,980	44,901	25,125	2,208	..	1,399,396
Value of plant and machinery ..	627,273	773,759	28,267	36,018	479	..	1,465,796
Salaries and wages paid ..	1,818,535	1,598,319	176,090	88,215	1,742	..	3,713,701
Value of power, fuel, etc., used ..	216,099	274,064	11,714	7,497	148	..	510,122
Value of materials used ..	4,881,597	4,556,620	298,630	112,175	2,720	..	9,851,742
Total value of output ..	7,237,001	7,740,934	593,700	265,138	7,178	..	15,844,851
Value of production ..	2,139,605	2,910,250	283,356	145,466	4,310	..	5,483,987

39. **Electric Light and Power Works.**—(i) *Details for each State.* The increased demand for electrical energy has been responsible for considerable development in electric light and power works during recent years. Since 1938-39 the production of electric light and power has increased from 4,688 to 8,300 million K.W.H. in 1947-48, or by 78 per cent. Particulars for the year 1947-48 are as follows :—

ELECTRIC LIGHT AND POWER WORKS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	93	67	46	41	113	3	363
Number of persons engaged ..	3,013	1,979	796	1,052	860	126	8,426
Value of land and buildings ..	4,393,949	2,623,327	825,425	1,531,242	517,470	605,674	10,497,087
Value of plant and machinery ..	1,069,130	10,776,411	2,834,315	1,049,012	1,024,304	3,179,027	31,818,613
Salaries and wages paid ..	1,742,954	966,791	356,456	401,883	355,507	50,347	3,873,938
Value of power, fuel, etc., used ..	1,220,329	1,501,004	1,182,805	1,080,118	1,120,768	181	9,449,035
Value of materials used ..	780,898	193,704	116,575	57,930	94,601	18,710	2,333,925
Total value of output ..	11,477,636	4,248,220	2,129,294	2,084,726	1,749,806	159,475	21,849,150
Value of production ..	6,506,544	2,190,475	729,824	971,978	525,834	140,584	11,065,239

Particulars of the types of engines and generators installed in Electric Light and Power Works and their rated horse-power are given on page 1097.

(ii) *Production.* The increase in the production of electric light and power in each of the States since 1938-39 is shown in the following table :—

ELECTRIC LIGHT AND POWER WORKS : PRODUCTION.
(‘000 K.W.H.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1938-39	1,948,490	1,222,505	387,368	256,283	307,002	566,691	4,688,339
1943-44	2,826,132	1,777,769	563,489	393,794	313,261	801,945	6,676,390
1944-45	2,877,336	1,817,347	602,451	409,866	329,865	802,151	6,839,016
1945-46	2,831,801	1,904,403	612,672	402,134	338,799	819,958	6,909,767
1946-47	3,228,670	2,001,994	655,797	458,899	378,266	803,801	7,527,427
1947-48	3,546,345	2,259,938	759,080	519,531	402,300	872,680	8,359,874

40. *Gas-works.*—(i) *Details for each State.* Gas-works are in operation in the majority of important towns in Australia. New South Wales returned seven coke factories and Queensland one, working as separate industries, but under the present classification these are included in Class I.—Treatment of Non-metalliferous Mine and Quarry Products. The following table gives particulars of gas-works in each State for the year 1947-48 :—

GAS-WORKS, 1947-48.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	Australia.
Number of factories	39	39	16	3	4	2	103
Number of persons engaged ..	1,361	1,337	397	388	(a)	(a)	3,718
Value of land and buildings £	848,371	609,894	203,385	27,466	(a)	(a)	1,814,838
Value of plant and machinery £	3,103,555	4,433,182	688,011	1,181,435	(a)	(a)	10,004,594
Salaries and wages paid £	645,788	577,636	150,220	171,075	(a)	(a)	1,643,435
Value of power, fuel, etc., used £	491,936	44,307	12,161	2,777	(a)	(a)	594,989
Value of materials used £	2,137,477	1,968,606	419,037	398,259	(a)	(a)	5,254,838
Total value of output £	4,486,685	3,114,351	791,086	644,103	(a)	(a)	9,521,793
Value of production .. £	1,857,272	1,101,438	359,888	243,067	(a)	(a)	3,671,666

(a) Not available for publication; figures are included in total for Australia.

(ii) *Coal Used and Production.* The following table gives details for 1947-48 :—

GAS-WORKS : COAL USED AND PRODUCTION, 1947-48.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
COAL USED.							
Coal tons	887,594	709,512	179,675	126,228	(a)	(a)	1,981,733
PRODUCTS.							
Gas produced '000 cubic ft.	18,092,738	12,166,559	2,660,715	(a)	960,591	(a)	36,303,702
Gas sold '000 cubic ft.	15,758,381	10,709,564	2,314,384	(a)	870,480	(a)	31,865,153
Coke produced .. tons	585,098	389,505	84,459	75,190	(a)	(a)	1,170,545
Coke for sale .. tons	318,542	238,408	30,736	49,256	(a)	(a)	656,315

VALUE (£).

Gas sold	3,150,465	3,470,545	980,523	(a)	314,823	(a)	8,874,012
Coke for sale	457,732	517,422	47,739	137,712	(a)	(a)	1,193,974

(a) Not available for publication; figures are included in total for Australia.

Since 1938-39, when the output of gas was 21 thousand million cubic feet, production has increased each year and reached 36 thousand million cubic feet in 1947-48.

CHAPTER XXV. WATER CONSERVATION AND IRRIGATION.

A. GENERAL.

§ 1. Introduction.

1. **Special Article.**—The last issue of the Official Year Book (No. 37, pp. 1096–1141) contained a special article “The Conservation and Use of Water in Australia” prepared by Mr. Ulrich Ellis of Canberra. This article, which incorporated basic information supplied by the various Commonwealth and State Departments and other bodies connected with water conservation, presented a comprehensive picture of recent development in this field. The previous issue of the Year Book which contained such a survey was No. 23, 1930, pp. 636–661.

In the present issue much of Mr. Ellis’s article of a statistical nature, including that contained in this chapter in recent years, has been advanced, but for details of general, descriptive and historical matter reference should be made to the original article although the more important sections have been retained, but sometimes in very condensed form.

2. **Geographical and Climatic Factors.**—The opening section of the special article contained a simplified picture of the main geographical and climatic features of Australia, presented in order to enable the reader to appreciate the significance of the Australian water pattern. It is not intended to reproduce this here; but Chapter II.—Physiography of this issue contains considerable detail of the climatic features of Australia with some reference to geographical features, while earlier issues of the Year Book deal exhaustively with these subjects.

3. **Statistical Aspects.**—It should be noted that the basis of recording statistics of water use differs in various States. Therefore, while every attempt has been made to present a uniform statistical picture, it has been difficult to ensure that statistics quoted as between States are strictly comparable in detail. Some steps^a have been taken by State authorities with a view to securing uniformity of statistical data, but until this objective has been achieved allowance should be made for this factor in this Chapter.

The Chapter deals with the conservation and utilization of water on a nation-wide or State-wide basis, and also devotes particular attention to these activities in relation to rural areas and purposes. For information on water conservation and utilization for the purpose of water supply and sewerage in the metropolitan areas, cities and towns of Australia *see* Chapter XV.—Local Government, § 5. Water Supply, Sewerage and Drainage.

4. **Select Bibliography.**—Appended to the special article in Official Year Book No. 37 is a select bibliography containing a list of selected books, reports, papers, etc. dealing with the development of the water resources of Australia and their conservation (*see* pp. 1140–1). The works included, numbering more than thirty, are classified under the headings “General”, “Murray River”, “Sub-surface Water”, “Snowy River”, “Hydro-electricity”, “States” and “Catchments”.

§ 2. Water Resources and their Utilization.

1. **Surface Supplies.**—Though river gaugings have been recorded over considerable periods in some parts of Australia, records elsewhere are intermittent, of short duration, or non-existent. Therefore, it is impossible at present to estimate, with any degree of reliability, the total average annual flow of Australian streams and it has been doubted whether the total annual average flow of all Australian Rivers would exceed 60,000,000 acre feet, a figure small in comparison with the flow of rivers in other continents.

For purposes of comparison the following estimates of mean annual discharge in other parts of the world are stated here in millions of acre feet: Nile, 72; Danube, 228; Amazon, 1,780; Volga, 148; Mississippi, 474; and the ten main rivers of the United States of America, 900 (in the aggregate).

2. **Major Dams and Reservoirs.**—The table below lists existing major dams and reservoirs, together with those under construction or projected, as at the commencement of 1950.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA.

Name.	Location.	Capacity (Acre feet).	Height of Wall (Feet.)	Remarks.
EXISTING DAMS AND RESERVOIRS.				
Hume	Murray River near Albury	1,250,000	106	Part of Murray River Scheme— storage for domestic, stock and irrigation purposes. To be increased to 2,000,000 acre feet.
Miena	Great Lake, Tas- mania	1,125,000	40	Regulates water to Waddamana hydro-electric power station.
Burrinjuck ..	Murrumbidgee River, New South Wales	771,640	247	Storage for irrigation and pro- duction of hydro-electric power.
Lake Victoria ..	Murray River near South Australian border, in New South Wales	551,700	..	Natural storage for irrigation in South Australia.
Waranga	Goulburn River, Victoria	333,400	..	Earthen embankment, 23,800 feet long. Irrigation storage.
Eildon	Upper Goulburn River, Victoria	306,000	..	Rock filled embankment, 2,300 feet long and concrete spillway, 700 feet. Irrigation storage.
Wyangala ..	Lachlan River, New South Wales	303,900	190	Storage for domestic, stock and irrigation purposes and for generation of hydro-electric power.
Clark	Derwent River, Tas- mania	243,000	200	Serves Tarrareah hydro-electric power station.
Avon	Nepean River, New South Wales	173,800	230	Part of Sydney water supply.
Glenmaggie ..	Gippsland, Victoria	104,500	100	Storage for irrigation.
DAMS AND RESERVOIRS UNDER CONSTRUCTION OR PROJECTED.				
Eildon	Upper Goulburn River, Victoria	2,350,000	..	Existing dam being enlarged for irrigation storage.
Warragamba ..	Warragamba River, New South Wales	1,678,500	415	Under construction for Sydney water supply.
Jindabyne ..	Snowy River, New South Wales	1,100,000	..	Projected as part of Snowy Mountains Hydro-electric Scheme.
Adaminaaby ..	Euclumbene River, New South Wales	1,000,000	..	" " " "
Somerset	Stanley River, Queensland	724,000	130	Under construction for Brisbane— Ipswich water supply.
Upper Yarra ..	Yarra River, Vic- toria	110,000	270	Under construction for Melbourne water supply.

3. **Irrigation.**—(i) *History.* The history of irrigation in Australia commenced in Victoria after the droughts of 1877 and 1881, when it became recognized that the northern plains could be developed only with water artificially supplied. Thereupon, the Government began the systematic regulation of north-flowing streams. George Chaffey and his brother (who were successful irrigationists in California) were invited to investigate the possibilities of the Murray River from Echuca to Renmark. The Chaffey brothers later established irrigation settlements at Mildura (Victoria) and Renmark (South Australia). Though their efforts were at first clouded with difficulty and misfortune, the possibilities of irrigated culture in these areas were proved beyond doubt.

The Irrigation Act passed by the Victorian Government in 1886 influenced the whole future of water development in Australia. This Act vested in the Government the right to use water in any stream, lake or swamp; provided that no riparian rights could be established which might prevent the use of water for irrigation; authorized the construction of Government works; and provided finance for irrigation trusts elected by the people to conduct local schemes. Similar legislation followed in other mainland States.

(ii) *Extent and Nature of Irrigated Culture.* About half of Australia's irrigated acreage is now in Victoria, and about two-thirds is situated along the Murray and its tributaries (including the Murrumbidgee) in the three States of New South Wales, Victoria and South Australia. In these areas served by the Murray and its tributaries irrigation water is used extensively for vines, orchards, pastures, fodders, and for domestic and stock purposes.

Approximately half of Queensland's irrigated acreage is devoted to sugar cane. Western Australia's small irrigated acreage is confined to areas in the south-west where fodders and pasture are served. Irrigation schemes have not been developed in Tasmania or the Northern Territory.

With the expansion of markets for primary products after the 1914-18 War, the irrigated acreage has gradually extended and is now about four times as large as in 1917. The following table shows the area of land irrigated in each State during the years 1936-37 to 1941-42 and 1945-46 to 1948-49 :—

AREA OF LAND UNDER IRRIGATED CULTURE.
(Acres.)

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
1936-37 ..	4151,683	518,827	44,509	42,292	13,295	9,987	70	780,663
1937-38 ..	4170,719	590,112	49,154	44,250	14,284	8,428	6	876,953
1938-39 ..	4183,518	515,357	48,953	43,602	14,278	8,599	50	814,337
1939-40 ..	4326,875	517,993	55,133	44,470	15,443	8,656	263	968,763
1940-41 ..	4325,075	506,692	60,961	46,268	14,513	8,821	391	1,052,691
1941-42(e) ..	4354,762	602,074	(d)	45,757	15,060	6,975	48	(d)
1945-46 ..	4331,030	656,845	68,347	42,192	16,864	11,279	502	1,127,059
1946-47 ..	4544,775	708,590	79,037	46,145	17,947	9,326	743	1,406,556
1947-48 ..	4510,168	686,848	84,052	42,583	19,197	9,908	574	1,353,330
1948-49(e) ..	4576,206	722,968	91,417	48,185	25,381	9,563	533	1,474,253

(a) Excludes pasture and fallow lands. (b) Includes pasture and fallow lands. (c) Details for years 1942-43 to 1944-45 are not available. (d) Not available. (e) Subject to revision.

The next table shows the area of land irrigated in each State during 1948-49 according to the nature of irrigated culture.

AREA OF LAND UNDER IRRIGATED CULTURE : 1948-49.(a)
(Acres.)

Crop.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Cereals, Hay, etc.	135,430	86,952	18,710	..	..	145	366	241,603
Rice ..	31,402	..	..	..	..	..	..	31,402
Vegetables ..	15,820	13,880	17,570	4,387	7,224	..	126	59,007
Orchards ..	19,877	35,890	2,852	9,122	3,654	1,040	1	148,186
Vineyards ..	11,344	40,258	..	23,813	335	..	..	..
Sugar Cane ..	..	..	49,153	..	..	..	..	49,153
Hops ..	..	..	..	..	..	..	..	1,249
Cotton ..	..	..	177	..	..	1,249	..	1,249
Other Crops ..	24 82,859	(d)28,603	(b) 2,451	1,732	846	278	..	177
Total Crops ..	296,732	205,583	90,913	39,054	12,059	2,712	493	647,546
Pastures ..	279,474	6 517,385	504	9,131	13,322	6,851	40	826,707
Total ..	576,206	722,968	91,417	48,185	25,381	9,563	533	1,474,253

(a) Subject to revision. (b) Includes tobacco, 1,453 acres. (c) Includes lucerne for grazing and cutting, 33,008 acres. (d) Includes fallow land. (e) Includes lucerne fed off.

(iii) *Irrigation Trends.* With more clear knowledge about the limits of water availability, new trends in irrigation are appearing. These include the improvement of irrigation techniques in established areas, a growing appreciation of the benefits and necessity of irrigation in humid and sub-humid areas with a flush annual rainfall, the use of irrigation to stabilize the stock industries, especially on an "extensive" basis, consideration regarding the provision of weirs to prevent the entry of salt water, the increasing quest for cheap electric power to aid pumping operations for stock, domestic and irrigation purposes, and an increase in the extent of spray irrigation. These developments are described more fully in the previous issue of the Year Book, page 1099.

(iv) *Research.* Comprehensive programmes of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research Organization, often in collaboration. Special attention is being given to the following: High water tables due to the application of water to land where no natural drainage lines exist, or where drainage lines are too small to cope with extra water; presence of salt in semi-arid soils, resulting in surface accumulation; salinity of water, which makes it unsuitable for human beings, stock and plant life; adverse reactions of semi-arid soil types to increasing quantities of water which affect the sub-soil; increasing density of stock on irrigated pastures which leads to the spread of such diseases as foot rot and fluke in sheep, and mastitis and contagious abortion in cattle; and growth problems affecting plants and trees.

The Commonwealth Scientific and Industrial Research Organization maintains the following research stations:—Merbein (Victoria), horticultural problems, mainly vines, soils, watering and diseases; Griffith (New South Wales), mainly citrus and vegetable problems; Deniliquin (New South Wales), pastures; Werribee (Victoria), stock diseases. These stations are in close contact with the settlers. In the maintenance of Merbein and Griffith Stations the Commonwealth is assisted, financially or otherwise, by the New South Wales Water Conservation and Irrigation Commission and private organizations.

The Soils Division of the Organization has made detailed surveys of more than a million acres since 1927, with less detailed reconnaissance surveys over many millions of acres. The Division works closely with State authorities. The keynote of soil investigations is relationship between soil and land use, and there is an increasing tendency to seek such surveys before irrigation districts are established.

An important step forward in agricultural development in Australia has been taken in the creation of the Irrigation Research and Extension Committee with head-quarters on the Murrumbidgee Irrigation Areas. The scheme aims to provide the best possible service to farmers. It is regarded as an experiment in organization and regional administration which may have far-reaching effects. The objectives are:—to enable the agricultural extension services to the farmers in the defined sub-region to be continued and developed; to provide a system for advising on local agricultural policy and organization; to provide means for farmer opinion to have due weight in the consideration of regional agricultural administration and policy; to achieve a unified approach to sub-regional extension in all branches of agriculture; the research needs of the sub-region and the co-ordination of the agricultural research of the various rural institutions working therein; to achieve close liaison between research and extension; and to conduct research in extension methods.

The Committee is representative of the State Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales and certain farmers' organizations (including Extension Groups). Finance is provided by these authorities on an agreed basis. Introduced in the present form in 1947, the scheme is to operate initially for a period of seven years.

4. *Preservation of Catchments.*—As water conservation commences on the catchments, it is becoming increasingly recognized that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion, to conserve soil generally, and to minimize

effects of floods, overstocking, bush fires, and destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reafforestation and the preservation of catchments. In recent years efforts to counteract soil erosion have been intensified and there is some evidence of a more unified approach to catchment, water, forestry, and land use factors regarded as parts of a single problem.

The Victorian Parliament passed the Soil Conservation and Land Utilization Act in 1947 to establish an authority to control land on catchments, to determine whether such land shall be used for forestry, grazing or other purposes, and to delegate to other authorities the responsibility of carrying out necessary works to maintain catchment efficiency. The Act was amended in 1949 and operated from 19th February, 1950. In New South Wales a Conservation Department was established in 1944 under single Ministerial control, linking the Water Conservation and Irrigation Commission, the Soil Conservation Service (established in 1938) and the Forestry Commission. In Queensland the Bureau of Investigation has been established under the Land and Water Resources Act of 1943 designed to bring about the co-ordinated development of land and water resources. Other States are also giving attention to this problem.

5. **Hydro-electric Power.**—Australia's main coal deposits lie within the well-watered regions, but with accelerated industrialization, increased interest is being displayed in the development of hydro-electric power for rural electrification, for stabilizing inter-connected systems, for contributing to metropolitan peak demands, and for general industrial and domestic purposes. On the mainland it is usual to allot water for irrigation purposes, combining this with hydro-electricity to whatever extent is possible. During summer, when irrigation is proceeding, there is ample discharge for power, but in the non-watering period the main objective is to store water.

Hydro-electric possibilities are confined almost exclusively to the eastern coastline of the mainland and to Tasmania. In 1932 the Power Survey Sectional Committee of the Standards Association of Australia estimated water power resources to be 4,750,000 h.p. of which 3,500,000 was located in Tasmania. Authorities are now inclined to believe that mainland sources could contribute approximately 2,000,000 h.p., bringing the total to 5,500,000. Recent investigations concerning the potential use of the Snowy River may increase the estimate further. The Committee also estimated that the water power potential in Papua and New Guinea was approximately 20,000,000 h.p.

It has been estimated that the total capacity of generators installed in Australia amounted to 2,286,008 k.w. at 30th June, 1949, of which generators with capacity of 272,763 k.w. were driven by water power. The total production of electric energy in Australia amounted to 9,053 million k.w.h. for the year 1948-49, of which 1,378 million k.w.h. was derived from hydro-electric stations.

Hydro-electricity is generated in all States except South Australia and Western Australia and the Northern Territory. Water is the sole source of electric power in Tasmania, all other States depending largely on steam and oil.

6. **Sub-surface Supplies.**—(i) *General.* While a more or less complete general picture of the available and potential surface water resources exists, much remains to be done with regard to the location and development of sub-surface supplies, although the extent and potentials of the artesian basins—particularly the Great Artesian Basin—have been fairly accurately determined. In view of the importance of sub-surface waters as the basis of settlement over large areas of Australia, it is necessary to devote particular attention to these resources.

The use of sub-artesian supplies is also extensive and more development is possible, but the shallower groundwater supplies, particularly along alluvium valleys and coastal sandbed areas, have not been investigated and developed in any degree, except in a few localities. Increasing efforts are being made to locate and develop sub-surface supplies and comprehensive hydrological surveys have been initiated in many parts of Australia for the purpose of locating, further developing and utilizing these waters.

A good deal of investigational work has been carried out and many data have been recorded in respect of artesian basins, and the decreasing flow therefrom; and this information is being progressively supplemented, as is also the information recorded in respect of sub-artesian supplies.

(ii) *Definitions.* The term "artesian" is applied when the water contained in an aquifer and tapped by a bore hole rises and flows under hydro-static pressure above ground level. When a water-bearing stratum is intersected by a bore hole, and the water rises above the level at which it is tapped but does not rise sufficiently high to flow naturally above surface level, it is termed "sub-artesian".

The term "ground water" is generally applied to shallower waters found in alluvium or sand beds not confined between impervious strata, and these waters usually do not rise in a bore hole above the level at which they are met.

(iii) *Artesian and Sub-artesian Supplies.* Pressure water, variable in quantity and quality, either artesian or sub-artesian, is obtainable in many parts of Australia, the various artesian basins extending over approximately one-third of the continent.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 550,000 square miles, comprising about 350,000 in Queensland, 76,000 in New South Wales, 100,000 in South Australia and 24,000 in the Northern Territory. Of the numerous defined major and minor water-bearing basins in Australia, the following are the principal :—

PRINCIPAL WATER-BEARING BASINS : AUSTRALIA.

Name.	State.	Geological Age.	Area.	Depth of Water.
			Square Miles.	Feet.
Great Artesian ..	Queensland, New South Wales, South Australia and Northern Territory	Cretaceous-Jurassic ..	550,000	Up to 7,000
Murray ..	Victoria, New South Wales, and South Australia	Miocene	107,000	100 to 900
Torrens ..	South Australia ..	Recent Pleistocene ..	4,000	Up to 600
Coastal Plain ..	Western Australia	Recent Jurassic ..	10,000	200 to 2,500
Adelaide ..	South Australia ..	Recent Oligocene ..	1,100	100 to 500
Gippsland ..	Victoria ..	Pleistocene-Oligocene	1,800	200 to 1,800
Port Phillip ..	Victoria ..	Pleistocene-Oligocene	300	Up to 600
Euccla ..	Western Australia, South Australia	Pliocene-Miocene ..	68,000	300 to 2,000
North-west ..	Western Australia	Tertiary Permian ..	40,000	400 to 4,000
Collie ..	Western Australia	Permian	500	..
Desert ..	Western Australia	Permian	130,000?	200 to 3,000

More than 3,000 artesian bores have been constructed within the Great Artesian Basin and the daily free discharge from all bores continuing to flow in Australia has recently been stated to exceed 350 million gallons, of which the loss by evaporation and seepage has been estimated at more than 90 per cent. Sub-artesian bores and wells throughout Australia number more than 200,000.

Artesian water generally is good stock water, but it is unsuitable for plant life; while in certain areas sub-artesian waters are suitable for all uses including irrigation. In some districts a considerable amount of irrigation is carried out from shallow ground water supplies.

In common with other countries possessing artesian supplies, Australia has been faced with the problem of flow diminution. It was recognized early that flows were diminishing as more bores were drilled, and in respect of the Great Artesian Basin, for example, although only a small proportion of the actual quantity of water stored has been drawn off, much of the original pressure has been lost, the hydraulic gradient has been steepened, and most of the free flow has been lost for all time. Nevertheless, although it has been said that eventually all bores within the Great Artesian Basin would cease to flow naturally and that the water would have to be pumped to the surface for use, it is now considered that while many of the bores will ultimately cease to flow, many will not cease, but will assume a perpetually steady rate of flow, corresponding with the average intake of water from rainfall absorbed by sandstone outcrops. Diminution in flows from artesian bores has emphasized the need to eliminate wastage as much as possible, and investigations have been made regarding wasteful methods of distribution of artesian water by open channels or "bore drains" and the careless use of water. (For greater detail on this subject see Official Year Book No. 37, pp. 1103-4.)

The Queensland Government appointed a Committee to investigate various aspects relating to the Great Artesian Basin, with particular reference to the problem of diminishing supply, and an interim report was published in 1945 and its final report is being prepared.

(iv) *Ground Water.* Ground water supplies are used in various parts of Australia for industry, irrigation, stock and domestic purposes, and their development is receiving considerable attention. The most notable ground water scheme is that conducted by the Hunter District Water Board where ground water from the Tomago sandbeds near the mouth of the Hunter River, New South Wales is used to supplement water storages fed from surface sources. For further information on ground water see Official Year Book No. 37, p. 1104.

(v) *Windmills.* In the development of water resources—and especially underground water—windmills have played a substantial part. The bulk of windmills (an unofficial estimate has assessed the number in use at about 250,000) are installed on farms and stations for watering live-stock, though they also serve other industrial and domestic purposes. For further information see Official Year Book No. 37, page 1105.

7. *Industrial, Metropolitan and Country Town Supplies.*—Details relating to urban water supply systems will be found in Chapter XV.—"Local Government" of this Year Book (pp. 682-694).

§ 3. National and Interstate Aspects.

1. *Constitutional Phases.*—As the government of Australia is conducted under a Federal system, and as the Commonwealth Constitution makes special reference to water problems, both the Federal and the State Governments have an interest in the control and conservation of water. As main responsibility for control of water resources resides in the State governments, and as political boundaries sometimes intersect river valleys and catchments, co-operation between governments has been necessary to develop resources in certain cases. Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following sections.

In the Report on Irrigation, Water Conservation and Land Drainage presented to the Commonwealth Government by the Rural Reconstruction Commission in 1945 national aspects of water conservation and use were emphasized. The report recommended the adoption of an all-Australian plan, having the assent of the various governments, to obviate lack of co-ordination, and that the Commonwealth should endeavour to promote interstate co-operation and co-ordinated development generally.

The Irrigation Production Committee was established in 1938, pursuant to a resolution by the Australian Agricultural Council. The purpose of the Committee was to carry out comprehensive investigations into the various agricultural activities of lands irrigable by the River Murray and its tributaries, with a view to co-ordinating developmental activities on such lands. Shortly after its establishment, the work of the Committee was interrupted by war conditions necessitating diversion of its staff to other

problems of more immediate importance. In August, 1945, the Australian Agricultural Council decided to resuscitate the Irrigation Production Advisory Committee, and this decision was confirmed by the Premiers' Conference in January, 1946. The functions of the Committee were subsequently defined by the Agricultural Council as follows:—(a) to prepare for the consideration of the Australian Agricultural Council, or any Committee of Ministers appointed by the Council, conclusions formed from investigations to be carried out by Commonwealth and State Officers into the various agricultural industries which it is possible to develop on irrigated lands; (b) to undertake long-term co-ordination of land utilization in irrigable areas served by the River Murray and its tributaries, this involving co-ordination of all available lands and the carrying out of such supplementary investigations as may prove necessary. The Committee was originally representative of only the Commonwealth Department of Commerce and Agriculture and of the Departments of Agriculture and the Water Conservation and Irrigation Authorities in the States of New South Wales, Victoria and South Australia. The membership of the Committee was subsequently extended to include representatives from other States desiring to be represented. Tasmania has not so far sought representation on the Committee. In addition to representatives of the Commonwealth Department of Commerce and Agriculture, the Committee at present includes, from each State represented, one representative from the Department of Agriculture and one representative from the State authority controlling water conservation and irrigation. The chairman is the Commonwealth Director-General of Agriculture.

2. *Murray River Scheme.*—(i) *General.* The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 414,000 square miles or one-seventh of the area of the Australian continent, comprising five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland, and one-fortieth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Murrumbidgee (1,050 miles), the Darling (1,760 miles), and the Goulburn (280 miles). The average annual flow of each of the chief contributory streams is as follows:—Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,400,000 acre feet; Murrumbidgee River, 2,600,000 acre feet; Goulburn River, 2,250,000 acre feet; Darling River, 2,150,000 acre feet; and Ovens River, 1,200,000 acre feet.

(ii) *History of Control.* Discovered in 1824, the Murray played a substantial part in early pastoral settlement. Navigation was the predominant initial interest, permitting cheap transport of supplies and produce. Irrigation settlements which developed after 1887 commenced a new era in the River's history. In 1914 the three State authorities whose territories were served by the River agreed that joint control was necessary, and the following year the Governments of the Commonwealth, New South Wales, Victoria and South Australia entered into the River Murray Agreement and the Parliaments concerned subsequently passed ratifying legislation. The Agreement provided for the construction of works, the allocation of the water between the three States, and the appointment of a Commission to implement the Agreement. The Commission comprises four Commissioners, representing the Commonwealth and the three States respectively. The Commonwealth representative presides.

(iii) *River Murray Waters Agreement.* Under the Agreement construction works are carried out by the States (who are also responsible for maintenance) subject to the approval and direction of the Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to fill Lake Victoria storage once, and with the aid of water returned from Lake Victoria, to maintain certain specified flows in the lower river varying from 47,000 acre feet per month in the winter months to 134,000 acre feet per month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. These flows are to meet domestic and stock requirements in South Australia, losses of water in the locks, and evaporation losses other than in the lakes at the Murray mouth; together with 603,000 acre feet per annum for diversion from the Murray for irrigation in South Australia. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation.

Under the original agreement the major works comprised two large storages—one on the Upper Murray above Albury (the Hume Dam) and the other at Lake Victoria in New South Wales near the South Australian border. In addition, provision was made for a number of weirs and locks along the Murray and Murrumbidgee Rivers. In 1934 the Agreement was varied to provide for the construction of a diversion weir at Yarrawonga (145 miles downstream from the Hume Dam), and the provision of barrages at the mouth of the River to prevent the entry of salt water. The amendment also limited the original proposal for 26 weirs and locks on the Murray and 9 on the Murrumbidgee to 13 on the Murray and 2 on the Murrumbidgee. At the same time it was agreed that the Hume Dam should be completed to a capacity of 1,250,000 acre feet with provision for later increase to 2,000,000. As a result of the amendment, navigation is limited to a route of 600 miles, extending from the mouth to a point some 50 miles above Mildura. All works authorized under the amended Agreement (except the enlargement of the Hume Dam to 2,000,000 acre feet) have been carried out at a total cost of £12,000,000, of which approximately half represents the cost of the Hume Dam. Expenditure has been shared equally by the Commonwealth and the three States.

At a Ministerial Conference held in October, 1948, the four parties to the Agreement resolved that the enlargement of the Hume Reservoir to 2,000,000 acre feet and the doubling of the capacity of the inlet channel to Lake Victoria storage should be proceeded with immediately at a further estimated cost of £2,000,000. The resolutions of the Conference were subsequently incorporated in an amending agreement which has now been ratified by legislation by all parties. Under the terms of the amending agreement, the States of New South Wales and Victoria are required to report annually on the condition of the Hume Reservoir catchment and to take any special action recommended by the Murray River Commission in regard thereto. The River Murray Commission has also power to initiate proposals for the better conservation and regulation of the waters of the Murray, and may cause surveys and investigations concerning such proposals to be undertaken.

At the Conference of Ministers held in July, 1949, to consider the diversion of the Snowy River, Conference decided that, by diversion of streams in the Snowy Mountains area, an average of approximately 400,000 acre feet per annum would be added to the Murray River. Although a minimum storage of 250,000 acre feet would be necessary to regulate this additional water, Conference considered it would be unwise to limit to this capacity any storage which might be constructed, and felt that a storage of not less than 1,500,000 acre feet should be provided, in order to give additional regulation of the Murray River itself as well as to provide for regulation of the diverted waters. Hydro-electric potentialities would also affect the size of the storage.

It was agreed, therefore, to ask the River Murray Commission to investigate the position and to determine the optimum size of the proposed storage it considered should be constructed and also its location. Investigations into the hydrographic aspects of the maximum practicable regulation of the waters of the Upper Murray, including diversions from the Snowy River, have been undertaken and the results are now under consideration by the Commission.

The total estimated quantity of water diverted in 1948-49 for irrigation from the Murray and its tributaries (under the River Murray Agreement) was as follows (in acre feet): New South Wales (748,800); Victoria (1,653,600); South Australia (184,900); a total of 2,587,300 acre feet.

(iv) *River Murray Works.* One of the major works of the Murray River Scheme is the Hume Dam, situated just below the junction of the Murray and Mitta Mitta Rivers, 10 miles above Albury, forming a lake of 33,000 acres. The design comprises a mass concrete spillway and outlet works extending 1,000 feet and an earthen embankment 106 feet high extending for 4,000 feet across the river flats. The length of the total structure is approximately 1 mile. Ultimate plans include provision for hydro-electric generation, and preliminary works associated with the construction of the power station are now in hand. Attention is also being given to the completion of the dam to its

designed capacity of 2,000,000 acre feet and also to the enlargement of the inlet channel to Lake Victoria, necessary to permit greater storage of periodic flood flows of short duration.

The Yarrawonga Diversion Weir was completed in 1939 to raise the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrawonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two have been constructed on the Murrumbidgee—one between Hay and the Lachlan Junction; and the other below the Lachlan Junction.

The Mulwala Canal, served by the Yarrawonga Weir, has an off-take capacity of 2,500 cubic feet per second, and will serve 1,500,000 acres of land in New South Wales. The Yarrawonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet per second, and is designed to serve 270,000 acres. Only a portion of both these areas will be irrigated.

Adjoining the river in New South Wales and 35 miles from the Murray-Darling Junction, Lake Victoria storage was completed in 1928 with a capacity of 551,700 acre feet and a surface area of 27,670 acres. The water released from Lake Victoria is used by the South Australian settlements.

Five barrages across channels near the Murray River mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and provided a number of storages on the tributaries, thereby contributing very materially to the large amount of irrigation development in the Murray Basin. The total capacities of such main storages are: New South Wales—Burrinjuck (Murrumbidgee), 771,640 acre feet; Wyangala (Lachlan), 303,900 acre feet; Victoria—Eildon (Goulburn), 306,000 acre feet (now being increased to 2,350,000 acre feet); Waranga (Goulburn), 333,400 acre feet. No storages exist on the Murray in South Australia. More details of these and other State works on Murray tributaries will be found in the sections dealing with State systems.

(v) *Production.* Irrigated production in the River Murray basin is mainly in the form of wine, dried fruits, fresh fruits, dairy produce, wool, fat lambs, rice, vegetables, poultry, eggs and pigs. The value of production from these areas has been estimated at about £19,000,000 a year, apart from the value added by processing or manufacture. The River Murray Commission estimates that without irrigation the annual production of these areas would not have exceeded £2,000,000 a year.

3. *New South Wales-Queensland Border Agreement.*—The Border Streams Agreement between New South Wales and Queensland, effective from 1st July, 1947, provides for the construction of works on portions of the valleys of the Barwon, McIntyre and Dumaresq Rivers, forming part of the boundary between the two States, on the basis of equal partnership in respect of works expenditure and use of water. The catchments (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland), and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. The scheme provides for a major dam on the Dumaresq, near Mingoola, 15 miles upstream from Texas, with a storage capacity of 120,000 acre feet, together with 12 weirs and 4 regulators, at an estimated cost of £1,140,000. Investigations suggest that 70,000 acres close to the storage are suitable for irrigation.

Climatic conditions are such that it is necessary to supplement rainfall from April to October by irrigation to stabilize and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry, is being examined. A Commission to carry out the Agreement has been appointed.

4. *Snowy Mountains Hydro-electric Scheme.*—(i) *General.* Following a comprehensive investigation into both the water and power potential of the Snowy River waters by a Technical Committee, representative of the Commonwealth and the States of New

South Wales and Victoria, in 1947 and 1948; and the submission by the committee of reports in 1948 and 1949, the Commonwealth Parliament in July, 1949, passed the Snowy Mountains Hydro-electric Power Act (No. 25 of 1949) setting up an Authority to implement the proposals agreed upon.

The basis of the proposals is to impound the Snowy River waters at high elevations and, by diverting them in a westerly direction, to use their potential power for the generation of electricity and then discharge them into the Murrumbidgee River systems for use in the irrigation areas. The proposals provide for the generation of $2\frac{3}{4}$ million kilowatts of power. This is the equivalent of the total existing output of all thermal and hydro-electric stations in Australia to-day. In addition, a further 2,100,000 acre feet of water per year, equal to almost four times the amount at present available to the great Murrumbidgee irrigation areas, will be provided in the proportion of 700,000 and 1,400,000 acre feet per year to the Murray and Murrumbidgee valleys respectively.

The scheme will be constructed in two separate sections, the first being known as the Snowy-Murray system, where the water is to be diverted by tunnel from a large dam across the Snowy River at Jindabyne, to the Swampy Plains River in the Murray Valley; and the second as the Snowy-Tumut system, the water in which will be diverted by tunnel from a dam across the Eucumbene River—a tributary of the Snowy—at Adaminaby, to the Tumut River, a tributary of the Murrumbidgee. The whole scheme will involve the construction of:—7 major dams (with a total storage capacity of approximately $4\frac{1}{2}$ million acre feet); 16 power stations; 86 miles of tunnels varying in diameter from 20 feet to 45 feet—one projected tunnel 35 miles long under the Alps will be one of the largest in the world; nearly 500 miles of racelines at high elevations.

The total expenditure is estimated at £225,000,000 including £100,000,000 for transmission lines. The scheme will form the greatest engineering and developmental work ever undertaken in Australia and one of the major engineering projects of the world.

(ii) *Snowy Mountains Hydro-electric Power Act 1949.* The Snowy Mountains Hydro-electric Authority is constituted by a Commissioner: he is assisted by two Associate Commissioners. The functions of the Authority are defined as:—(i) to generate electricity by hydro-electric works and (ii) to supply it to the Commonwealth for defence purposes and for use in the Australian Capital Territory. Power not required for these needs may be sold to the States of New South Wales and Victoria, in the proportion of two-thirds to one-third, at a price to be determined. The Act gives the Authority wide powers to carry out its functions.

(iii) *Work and Organization of the Authority.* Under the Commissioner the organization is divided into three main divisions, viz., a Civil Engineering Division, an Electrical and Mechanical Engineering Division and an Administrative Division.

The Authority came into being with the appointment of the first Commissioner on 1st August, 1949.

Since that date the Authority has:—

1. Established temporary head-quarters in Sydney. The permanent head-quarters will be at Cooma—present population, 2,500—on the Monaro High Plains. Work was begun in November, 1949 on erection of cottages, hostels, works buildings, etc.
2. Recruited technical and administrative staff of nearly 300 officers of whom more than 60 are engineers.
3. Recruited a labour force of over 1,000.
4. Enlisted the services of State Authorities, e.g. the Department of Main Roads (N.S.W.) and the Department of Public Works (N.S.W.) and private contractors to supplement its own efforts.
5. Started detailed investigations, surveys and preliminary field work mainly on (a) the reconstruction of existing roads and the provision of new roads into working points, (b) the provision of accommodation in the construction area, (c) building up and mechanizing the construction forces so that they will be able to start on the permanent structures when investigations and designs are sufficiently advanced.



Note in reference to the
high level basins in N S W

These areas of pressure water may be continuous, in great measure, with the upper or suspended aquifers of the Great Australian and Murray River Basins, but to what extent of overlap with the main basins is not known — except that the history of boring reveals, practically in every case, the existence of a thin bed of water above the deep water of the main basin.

AUSTRALIA

SHOWING THE EXTENT OF THE KNOWN
ARTESIAN BASINS

NOTES Main Artesian Basins shown thus
Marginal High level Basins " "
Groups of Mound Springs " "



Mt Gambier
(See note above)

This map was re-drawn from that published in the Report of the Fifth Interstate Conference on Artesian Water, Sydney, 1928

(iv) *Development of Power.* It is anticipated that the first instalment of power, estimated at approximately 60,000 kilowatts, will be available within four to five years. Additional power, bringing the figure to about 150,000 kilowatts, should be available in six to seven years. This will be followed progressively by larger blocks of power as the work proceeds.

B. STATES AND TERRITORIES.

§ 1. Australian Local Pattern of Water Conservation and Use.

From the foregoing section it is obvious that water conservation and use has both a national and a local aspect. The following survey indicates the local pattern of water resources and the steps taken by State Governments to bring about their development. It will be seen that water policies in the various States tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria almost every form of water scheme is in operation. In New South Wales major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water for the stock industries (mainly underground sources), and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilize sugar production.

Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest appertains to hydro-electric generation almost exclusively. The Northern Territory is primarily concerned with stock supplies and the safeguarding of long stock routes.

§ 2. New South Wales.

1. *General.*—(i) *Rainfall and History.* In the previous issue of this publication (page 1110) information on the pattern of rainfall and the history of irrigation in New South Wales preceded the description of water conservation and use in that State, but it has now been omitted. Chapter II.—Physiography of this issue, however, contains particulars of climatic conditions in each State.

(ii) *Administration.* Under the amendment of the Irrigation Act, made by the Conservation Authority of New South Wales Act, 1949, which came into force on 1st July, 1949, the Water Conservation and Irrigation Commission of New South Wales now consists of three members appointed by the Governor, one of whom is appointed as Chairman. The operations of the Commission cover water conservation, control of irrigation areas, establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, and a farm water supply scheme.

Under the Water Act the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Crown. A system of licences also operates for the protection of private works of water conservation, irrigation, water supply, drainage, and prevention of inundation.

For particulars of the New South Wales-Queensland Border Agreement ratified by Acts of both States in 1947, see page 1157 *ante*.

2. **Schemes Summarized.**—(i) *Location and Type.* The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam on the Lachlan, another tributary. None of the other rivers is regulated by large head storages, though weirs and dams have been provided for town supplies, etc., in many places, and head storages have been commenced on the Macquarie, Namoi and Hunter Rivers. Substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including Irrigation Areas, Irrigation Districts, Water Trust Districts, and Flood Control and Irrigation Districts. There are five Irrigation Areas: The Murrumbidgee Irrigation Areas consisting of 392,654 acres served with water through a channel system off-taking from the river at Berembend Weir; the Coomealla Irrigation Area of 35,450 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,550 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,806 acres, supplied with water pumped from the Murrumbidgee and the Tullakool Irrigation Area of 16,593 acres supplied from the Edward River at Stevens Weir. All these areas are administered by the Commission, and details of the various schemes are given in sub-section (iii) hereinafter.

(ii) *Works.* The capacities of the main storages (in acre feet) are :—

Murray:—Half share of Hume Dam, weirs and locks to Wentworth (736,420); Stevens Weir, Edward River (7,165).

Murrumbidgee:—Burrinjuck Dam (771,640); Berembend Weir (10,000); Maude Weir (6,740); Redbank Weir (7,360).

Lachlan:—Wyangala Dam (303,900); Lake Cargelligo (29,435); Jemalong Weir (1,790); Lake Ballyrogan (109,000)—works almost complete

Water from the Hume Dam is used for domestic and stock purposes, to provide bulk supplies for country towns, for the irrigation of vines, fruits and fodder in the Curlwaa and Coomealla areas, for domestic and stock supply and irrigation in the Berriquin, Wakool and Denimein Districts, and for water trusts for domestic and stock purposes and/or irrigation.

The Wyangala Dam is 30 miles upstream from Cowra in the Central West. It has a catchment of 3,200 square miles. Water from the dam, supplemented by the unregulated flow of the Belubula River, provides for domestic and stock purposes along the full length of the river (over 700 miles) and also for irrigation by land holders operating licensed pumps. The towns of Cowra, Forbes, Condobolin, Hillston and Booligal are supplied. A balance storage at Lake Cargelligo conserves water during periods of high flow for release as required. Water from the Lachlan, diverted at Jemalong Weir, supplies the districts of Jemalong and Wyldes Plains, serving an area of 223,930 acres. Wyangala is now producing hydro-electric power. Proposals for future development include provision of a head storage at Belubula River, the construction of a balance storage of 108,000 acre feet at Ballyrogan (now almost complete), and development by licensed divisions.

The approximate total length of channels (including main canals) in New South Wales is 2,507 miles. The approximate length of drains and escape channels is 903 miles, and approximate total length of pipe lines is 9 miles, making a grand total of 3,509 miles of channels and pipe lines, etc.

(iii) *Extent of Systems and Nature of Irrigated Culture.* The following table shows the areas of the various irrigation systems and the areas under irrigated culture in New South Wales during 1948-49, the latter according to the nature of irrigated culture.

**AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE :
NEW SOUTH WALES, 1948-49.
(Acres).**

Area under Irrigated Culture.

System.	Total Area.	Area under Irrigated Culture.									Total.
		Rice.	Other Cereals Grown for Grain.	Lucerne.	Other Fodder Crops.	Pastures.		Vineyards.	Orchards.	Vegetables.	
						Sown.	Natural.				Fallow and Miscellaneous.
Irrigation Areas—											
Murrumbidgee (within the Areas) ..	392,654	22,853	63,967	3,412	3,405	23,998	4,657	5,412	15,526	3,291	39,648
Land adjacent thereto ..	(a)	56	170	43	68	1,312	5,080	5	33	20	325
Coomoalla and Hay ..	52,806	..	..	133	262	989	77	3,109	1,105	4	..
Tullakool ..	16,593	1,753	1,202	..	..	80	50	..	..	..	150
Total ..	462,053	24,662	65,339	3,588	3,735	26,379	9,864	8,616	16,664	3,315	40,123
Irrigation Districts—											
Benerembah ..	122,010	3,211	20,383	1,459	2,335	15,510	460	..	..	28	126
Tabbita ..	6,046	242	355	40	95	400	10	..	..	1	..
Wah Wah ..	576,295	..	7,738	100	315	2,316	270	..	..	..	..
Berriquin ..	651,017	..	20,922	12,459	3,366	62,888	11,420	..	..	76	8,943
Wakool ..	486,282	3,287	1,926	958	831	21,387	10,259	..	..	15	257
Jemalong and Wyldes Plains ..	225,196	..	1,155	1,653	135	1,285	4,960	..	..	..	200
Flood Control and Irrigation Districts—											
Lowbidgee ..	375,000	..	..	..	..	..	94,828	..	..	..	..
Medgun ..	272,800	..	..	..	..	..	3,730	..	..	..	..
Total ..	2,714,646	6,740	52,479	16,669	7,077	103,816	125,937	..	..	120	9,526
Irrigation Trusts ..	15,853	..	105	142	72	436	1,035	2,010	348	94	..
Licensed Diversions—To Irrigate ..	(a)	..	..	12,600	6,623	9,698	2,309	718	2,865	12,291	202
Grand Total ..	..	31,402	117,923	33,008	17,507	140,329	139,145	11,344	19,877	15,820	49,551

(a) Particulars not available.

3. **Murrumbidgee Irrigation Areas.**—(i) *Description.* These areas comprise about a third of the State's irrigated acreage and in 1948-49 received 257,049 acre feet of the total water allocated for stock, domestic supply and irrigation (812,766 acre feet). They are served by the Burrinjuck Dam (capacity 771,640 acre feet), 40 miles north-west of Canberra, on the Murrumbidgee. The catchment above the dam is 5,000 square miles. The river rises on the high plateau north of Mount Kosciusko where rainfall exceeds 60 inches. Flow for the irrigation districts is supplemented by unregulated flow below the dam from the Tumut River. The dam also provides town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation is supplied for the Irrigation Districts of Tabbita, Benerembah and Wah Wah and the flood irrigation districts of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district and water is not released from the dam for that purpose. For the other undertakings, however, water is stored during the winter and spring freshets, fed by melting snows, and is released during

the September-April irrigation season. It passes along the river channel to Berembd Weir, 240 miles westward, where it is diverted to the main canal with an off-take capacity of 1,600 cubic feet per second. The main canal has been completed to beyond Griffith, 96½ miles from the off-take. Reticulation channels aggregate 840 miles and drainage channels 810 miles.

In addition 380 miles of supply channel run through adjacent irrigation districts in which the water supply is operated and maintained by the Commission, but land transactions are not under its control. The land on which the Murrumbidgee Irrigation Areas are situated originally comprised large sheep stations with a sparse population.

Population was 12,000 in 1923, 15,000 in 1929 and 20,000 at the 1947 Census. The population of the Yanco district (with Leeton as the centre) was then 9,000; and the population of the Mirrool Area (with Griffith at the centre) was 11,000.

(ii) *Administration.* The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas, also the distribution of electricity throughout those areas. Other local government services, including town water supply, are provided by Shire Councils. Land is disposed of by the Commission under freehold or perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30th June, 1949 was 346,455 acres, including 46,532 held for short lease grazing, agriculture, etc.

(iii) *Production.* Since the scheme was inaugurated in 1911 the value of total production has aggregated approximately £47,000,000. During the year ended 30th June, 1949, production was valued at £3,742,000. Live-stock contributed £438,000, (comprising sheep, £369,000; cattle, £39,000; pigs, £30,000); wool, £408,500; and dairy products, £72,800.

Rice (£843,900), wheat and oats (£585,000) and other crops (£1,300) contributed a total of £1,430,200. Horticulture accounted for £1,016,200, comprising almonds, apricots, citrus, drying grapes, table grapes, wine grapes, figs and olives, peaches and nectarines, pears, plums and prunes, quinces and apples. The greatest individual contributions were made by grapes, £285,700, peaches and nectarines, £190,000 and citrus, £206,000.

The total value of all vegetables was £309,500, including root crops, £165,000, tomatoes, £56,000, peas and beans, £33,600, cabbages, cauliflowers, onions and other products. A total of £66,800 represented the value of miscellaneous products.

Rice growing was initiated in 1924. Since then aggregate production has been 878,300 tons valued at £9,800,000. In 1948-49 the acreage sown was 30,865, and the quantity of water delivered was 177,299 acre feet. Water supplied for rice represents about two-thirds of the total delivered in the areas and a fifth of the water artificially supplied for irrigation in New South Wales. Before the war the rice crop was more than sufficient for Australian requirements. During and after the war the area planted was increased to the limit of water available. Rice has also been grown in the adjoining districts of Benerembah and Tabbita and in each of the years 1944, 1945 and 1946 some 4,000 odd acres were sown by the Water Conservation and Irrigation Commission at Wakool as a war-time project. Approval was given for some rice to be grown by individual landholders within Wakool Irrigation District during the 1948-49 season: this arrangement is of a temporary nature only and is not expected to continue beyond the 1951-52 season. On Tullakool Irrigation Area, however, rice growing is expected to become a regular feature of primary development there; 1,753 acres were sown during the 1948-49 season.

Co-operation is a prominent feature in the Murrumbidgee Areas. Co-operative organizations in the Mirrool section handle 300,000 bushels of fruit per year (compared with 54,600 in 1927-28). Aggregate sales turnover of the Leeton cannery in the past five years was over £1,000,000. Settlers and government agencies co-operate extensively in all matters relating to irrigation practice.

4. *Other Irrigation Areas.*—The Curlwaa, Coomealla, Hay and Tullakool Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which also is responsible for operation and maintenance of works to supply water at rates determined by the Commission.

Curlwaa Area, on the Murray near Wentworth, consists of 10,550 acres of which 2,143 acres comprised irrigated holdings at 30th June, 1940. Production consists of dried vine fruits, deciduous fruits and fodder crops of a total estimated value, in 1948-49, of £124,326.

Coomoalla Area, 9 miles upstream from Curlwaa, comprises 35,450 acres of which 3,970 acres are occupied in the developed portion. Other land in the undeveloped parts is leased for grazing. Production consists of vines, citrus and lucerne of an estimated value, in 1948-49 of £203,117. Vines account for 2,470 acres, citrus 237, and lucerne 31. Works are now under construction to provide 100 new farms for ex-servicemen.

Hay Area, on the lower Murrumbidgee, consists of 6,806 acres, of which 1,122 acres are occupied as irrigated holdings. Annual production, valued in 1948-49 at £19,000, comprises dairy products, fat lambs, sheep, wool and fodders.

5. Irrigation Districts.—These Districts are set up under the Water Act for (a) domestic and stock water supply and (b) irrigation. They differ from water trusts as the cost of the works is not required to be repaid over a period, but annual charges are made by the State for water supplied to landholders. The following are the districts or provisional districts constituted and the areas of land benefited:—*Murray River*: Wakool District (completed) 486,282 acres, Berriquin Provisional District (almost complete) 651,017 acres, Deniboota Provisional District (in progress) 303,064 acres, Denimein Provisional District (in progress) 157,150 acres, Jernargo Provisional District (domestic and stock supply only—works not yet commenced) 130,850 acres, Barramein Provisional District (domestic and stock supply only—works not yet commenced) 88,651 acres; *Murrumbidgee River* (completed): Benerembah District 122,010 acres, Tabbita District 6,046 acres, Wah Wah Provisional District 576,295 acres; *Lachlan River* (completed): Jemalong and Wyldes Plains District 225,196 acres; total 2,746,561 acres.

Since the completion of the Hume Dam several such districts have been established along the Murray to utilize the New South Wales share of the storage. Water is not available for the whole of the five million acres adjacent to the Murray in New South Wales, and therefore the schemes are based on "extensive" irrigation—that is water rights are allotted to holdings on the basis that only a portion of each holding (one acre in ten or twelve, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. "Water right" means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

Water to serve Berriquin and Wakool Districts is diverted through a main canal which will be 100 miles long when completed. At 30th June, 1949, 75½ miles had been constructed to those districts and a further length was under construction in the Deniboota District. Off-take capacity is 5,000 acre feet per day. Ultimately the water will serve Deniboota and other districts for which works have yet to be constructed.

Wakool, with 340 miles of channel, contains 202 holdings and it is expected that the area developed by irrigation will comprise about one acre in 13 of the total area. The total area irrigated in 1948-49 was about 39,000 acres and water supplied was 62,384 acre feet. Crops comprised fodders, pastures, cereals and vegetables, but sheep raising is the main industry.

Considerable subdivision has occurred within the Berriquin District and it is expected that the proportion of total area to be developed for irrigation will be considerably higher than in the case of Wakool. Total irrigated acreage was 120,074 at the 30th June, 1949. Sheep and wheat growing are main industries. The fat lamb industry is well developed and expanding. Dairying is making headway, and a butter factory has been established at Finley.

In the Benerembah, Tabbita and Wah Wah Districts, supplied from the channels of the Murrumbidgee Irrigation Areas, the quantity of water supplied during the 1948-49 season for irrigation was 56,947 acre feet, and the area irrigated was 55,424 acres, including rice and other cereals, pastures and fodder crops. The estimated value of production, included in the amount (viz., £3,742,000) for the Murrumbidgee Irrigation Area, was £690,900, including wool, live-stock, wheat and oats and rice.

For the same season 7,288 acre feet of water was supplied from the Lachlan River to irrigate a total area of 9,388 acres within the Jemalong and Wyldes Plains Districts. The total estimated value of production was £501,200, including wool and lambs £443,900, calves and pigs £23,650, wheat, oats and other crops £42,400 and lucerne £52,800.

6. **Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts.**—The Water Act provides for the constitution of Trust Districts for domestic and stock water and irrigation and empowers the Commission to construct, acquire or utilize necessary works. When the works are completed they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following water trusts—other than irrigation—have been constituted; the area in acres of each district is shown in parenthesis :—*Murray River* : Tuppall Creek (78,080), Bullatole Creek (68,320), Little Merran Creek (157,440), Poon Boon (32,985), Minnie Bend Flood Prevention (2,190); *Murrumbidgee River* : Yanko, Colombo and Billabong Creeks (1,001,210); *Lachlan River* : Torrigan, Muggabah and Merrimajeele Creeks (170,240), Condobolin West Weir (4,480), Marrowie Creek (295,040), Ulonga (71,655), Micabil Weir (11,500); *Miscellaneous* : Algudgerie Creek (9,760), Nidgerie Creek (46,880), Great Anabranche of Darling River (995,200), Collarenebrri Water Supply (88), making in all a total area of 2,945,068 acres. Thirteen of these trusts have been formed for the provision of water for domestic and stock purposes, one for a town supply and one for flood prevention.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. The following are the Trust Districts (area in acres is shown in parenthesis) :—*Hunter River* : Blairmore (511); *Murray River* : Bama (3,446), Goodnight (1,167), Bungunyah-Koraleigh (1,804), Glenview (2,751), Brangan (4,933); *Darling River* : Pomona (1,241), making in all a total area of 15,853 acres.

The Lowbidgee Provisional Flood Control and Irrigation District (375,000 acres) was constituted in 1945, being the first of its kind. Its purpose is to provide flood irrigation for 140,000 acres on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. There are 49 holdings. Another district (Medgun near Moree in the North-West) is in operation. Its total area is 272,800 acres, but particulars of the area that will benefit from flooding are not yet available.

7. **River and Lake, and Farm Water Supplies.**—During recent years the numbers of licences and permits issued to individuals to draw water from rivers and lakes for irrigation has increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognized as a means of stabilizing production in lean months. There has also been a considerable increase along the Murrumbidgee and Lachlan.

The Farm Water Supplies Act was passed in 1946. Technical advice and assistance, and financial assistance is made available to aid individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams.

8. **Underground Water.**—Extensive use is made of artesian, sub-artesian, and shallow underground water. Eighty thousand square miles in the north and western portions are covered by the Great Artesian Basin. Eighty Bore Water Trusts and twelve Artesian Wells Districts have been constituted. The Bore Trusts are administered in the same way as Water Trusts, but in Artesian Wells Districts settlers maintain the drains. Bore Trusts and Artesian Districts cover nearly five million acres and water is distributed through 3,285 miles of open earth drains. The number of artesian bores giving a flowing or pumping supply at 30th June, 1949 was 903 and the estimated total daily flow from 566 flowing bores was 61,411,000 gallons. The estimated flow in 1914-15 was 99,350,000 gallons per day for 372 bores. The deepest bore is Boronga No. 2 (4,570 feet) which also has the greatest flow, namely, 1,115,360 gallons per day. Of the total number of bores sunk, 222 have been installed by the Government in connexion with public watering places, Bore Water Trusts or Artesian Wells Trusts.

Since 1912 the Government has assisted settlers in shallow boring operations for which repayments are required over a period. To 30th June, 1949, the total constructed by the Commission's plants was 4,101 and their average depth was 295 feet.

9. **Future Programme.**—The programme of post-war development already in hand envisages expenditure of at least £30,000,000 spread over a period of fifteen years from the date of its commencement and includes the provision of eighteen dams and storages, eight diversion weirs, flood mitigation and river protection works in various parts of the State. Construction has been commenced on head storages at Keepit on the Namoi, Glenbawn on the Hunter and Burrendong on the Macquarie. A balance storage at Ballyrogan on the Lachlan is almost complete. The Hunter River development concerns an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. This is the first coastal scheme initiated in New South Wales. Total estimated storage of all proposed new storages is 5,500,000 acre feet.

10. **Hydro-electricity.**—The largest hydro-electric installation in New South Wales is that located at Burrinjuck Dam on the Murrumbidgee River. It consists of two power stations of 10,000 k.w. each, the first of which commenced operation in 1929. High tension transmission lines connect these plants with the major inter-connected system of New South Wales at Goulburn and Canberra. The output of the plant is dependent on the release of waters for irrigation purposes.

The Nymboida hydro-electric scheme was opened in 1924 with an initial capacity of 800 k.w. to supply Grafton, South Grafton, and Ulmarra over a transmission line of 31 miles. The Nymboida power station is situated on a tributary of the Clarence River in northern New South Wales and now has a capacity of 5,600 k.w. The station now operates in conjunction with a diesel station at Lismore and an associated transmission network to provide supply throughout the north-eastern area from Kyogle in the north to Kempsey in the south, a distance of some 200 miles north and south. In 1946 the system was inter-connected with the Department of Railways system based on Newcastle. The Nymboida system is controlled by the Clarence River County Council.

The Bega Valley scheme was opened in 1944 to supply an area of 2,700 square miles extending from Bermagui to Eden. The power is derived from the waters of Rutherford Creek, a tributary of the Bemboka River, and the capacity of the present installation is 500 k.w. Two 750 k.w. generating units are to be installed in conjunction with a further development on George's Creek, another tributary of the same river, and a comprehensive programme of rural electrification has been initiated. This system is controlled by the Bega Valley County Council.

Wyangala Dam power station was brought into operation in 1947. This station with an installed capacity of 7,200 k.w., utilizes the irrigation waters released from the dam to generate electricity, and in addition is designed to provide an essential stabilizing feature in the transmission system between Burrinjuck and Lithgow, to which the station is inter-connected. The output of the station at any time is dependent on the release of water for irrigation purposes.

Major projects which are being investigated by the New South Wales Government include the hydro-electric development of the Clarence River at the Gorge and other locations, and the hydro-electric development of the Shoalhaven River.

The Clarence Gorge scheme, situated 140 miles from Brisbane and 240 miles from Newcastle, embraces not only hydro-electric development, but also may offer considerable benefits by reason of the flood mitigation effects of a large dam built at this location. Investigations have shown that a dam 245 feet high would impound 4,500,000 acre feet of water and would enable the production of more than 100,000 k.w. of power. It is expected that eventually some 400,000 k.w. of power might be obtained from the Clarence River and its tributaries.

The Commonwealth and States agreed in 1945 on hydro-electric development at the Hume Dam on the Murray River near Albury. Plans are already well advanced for the installation at this site of two 25,000 k.w. water turbines and generators.

Investigations are also taking place into the possibilities of developing hydro-electric power in association with the Warragamba Dam, which is being built for water supply purposes for the Sydney metropolitan area, and at Keepit Dam, which is being constructed for irrigation purposes on the Namoi River near Gunnedah.

§ 3. Victoria.

1. *General.*—(i) *Rainfall.* Particulars of the rainfall pattern of Victoria were given on page 1117 of Official Year Book No. 37, and Chapter II.—Physiography of this issue contains information on climatic conditions in each State.

(ii) *Administration.* As indicated earlier (page 1149), practical steps were taken to organize Victoria's resources before the turn of the century, but the passage of the Water Act in 1905 marked the commencement of sustained progress. The State Rivers and Water Supply Commission established by this Act is vested with the control of all irrigation, rural domestic and stock supplies, town water supplies and flood protection and drainage undertakings outside the Metropolitan area, with the exception of the irrigation area operated by the First Mildura Irrigation Trust and the town water supplies operated by locally-constituted Waterworks Trusts or Local Governing Bodies.

The operations of the First Mildura Irrigation Trust and the various Waterworks Trusts and Local Governing Bodies, as well as the various Sewerage Authorities which control sewerage undertakings in country towns, are also subject to general supervision by the Commission.

2. *Systems Summarized.*—(i) *Works.* Since 1902, when a great drought emphasized the need for a concerted attack on water problems, the total capacity of water storages has increased from 172,000 to 1,974,250 acre feet (including Victoria's share of the Hume Dam). By means of channels, bores, etc. one-fourth of the State is artificially supplied for stock and domestic purposes. Large areas, which would be largely unproductive without water, are now contributing to the State's wealth. The area actually irrigated has increased from 110,000 acres in 1906 to 723,000 in 1948-49, and irrigation channels command 2,000,000 acres.

The Commission controls 35 large reservoirs and 230 subsidiary storages. The capacities of the storages in acre feet within the various systems at 30th June, 1949 were as follows :—

Goulburn System:—Eildon Weir, 306,000; Goulburn Weir, 20,700; Waranga Basin, 333,400; *Murray-Loddon System:*—Half share of River Murray Commission storages including Hume, Yarrawonga, Torrumbarry, Euston, Mildura and Wentworth, 736,420; Kow Swamp, Laanecoorie, Kerang-North and West Lakes, Lake Boga and Lake Cullulleraine, 148,210; total, 884,630; *Wimmera-Mallee:*—206,830; *Maffra-Sale:*—104,540; *Coliban:*—62,730; *Werribee:*—34,900; *Bellarine Peninsula:*—10,850; *Mornington Peninsula:*—5,800; *Otway:*—1,080; *Miscellaneous:*—2,790; *Total:*—1,974,250.

Irrigation channels extend 4,561 miles; domestic and stock channels, 8,500 miles and drainage and flood protection channels, 2,164 miles, a total of 15,225 miles. In addition, the Commission controls 1,145 miles of piping, comprising 200 miles of mains and 885 miles of reticulation. Farm holdings served with water total 39,813. Urban districts supplied by the Commission's channels and pipelines have a population of 145,260 persons in 128 towns, and a further 133 towns with a total population of 320,700 persons are supplied by Trusts under the supervision of the Commission.

To 30th June, 1949, the total capital expenditure on irrigation, rural water supply, country town water supply, and flood protection and drainage works amounted to £36,250,000, one-half of which is in respect of irrigation.

The total capital liability in respect of works under the control of the Commission at 30th June, 1949 was £30,470,000, of which £28,800,000 was borne by the State and £1,670,000 by water-users. Waterworks Trusts and local governing bodies had a total capital liability of £4,180,000 at 30th June, 1949, of which £2,040,000 was borne by the State and £2,140,000 by the Authorities.

(ii) *Extent of Systems and Nature of Irrigated Culture.* Although the area irrigated is less than 2 per cent. of the State, it yields approximately 16 per cent. of Victoria's rural production. The following table shows the areas of the various irrigation districts and the areas under irrigated culture during 1948-49:—

AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE: VICTORIA,
1948-49.

(Acres.)

System.	Total Area.	Area under Irrigated Culture.									Total.
		Cereals.	Lucerne.	Other Fodder Crops.	Pastures.		Vine-yards.	Orch-arids.	Market Gardens.	Fallow and Miscel-laneous.	
					Sown.	Natural.					
Goulburn	1,253,524	34,160	33,736	5,046	221,209	38,480	432	20,977	4,665	5,408	364,113
Murray—											
Torrumbarry Weir ..	370,776	13,837	11,032	3,006	95,580	57,381	4,790	2,148	1,085	3,645	192,504
Yarrawonga Weir ..	268,389	4,840	6,605	360	12,615	2,875	45	2,121	464	51	29,976
By Pumping	45,310	110	269	100	206	98	20,377	1,076	205	38	22,479
Total	684,475	18,787	17,906	3,466	108,401	60,354	25,212	5,345	1,754	3,734	244,959
Loddon and other North- ern Systems ..	(a) 19,725	2,979	1,224	277	3,617	1,691	64	4,587	1,786	1,935	18,160
Southern Systems ..	69,313	84	2,796	523	27,709	779	..	493	3,030	208	35,622
Mildura and Private Diversions	(b) 44,000	6,113	6,409	625	18,544	3,083	14,550	4,488	2,645	3,657	60,114
Grand Total	2,071,037	62,123	62,071	9,937	379,480	104,387	40,258	35,890	13,880	14,942	722,968

(a) Area of Campaspe District only.

(b) Area of First Mildura Trust District only.

(iii) *Production.* The influence of irrigation on Victorian production is illustrated by the following estimates prepared by the Commission of the value of production from irrigated areas:—1905-6, £500,000; 1925-26, £5,000,000; 1947-48, £17,000,000. Detailed classification of the 1947-48 irrigation production estimates is as follows:—Live-stock: Dairying, £4,500,000, Beef, £350,000, Pigmeats, £450,000, Lamb, Mutton and Wool, £3,200,000, Poultry and Eggs, £1,000,000, Total Live-stock, £9,500,000; Horticulture: Dried Vine Fruits, £3,200,000, Table and Wine Grapes, £160,000, Canning Fruits, £850,000, Fresh and Jam Fruits, £720,000, Citrus Fruits, £620,000, Total Horticulture, £5,550,000; Vegetables (including Tomatoes), £1,200,000; Other Primary Products, Cereals, Hay, etc., £750,000.

3. *Goulburn System.*—The Eildon and Waranga Reservoirs, on the Goulburn River, supply half the irrigated acreage, and form the largest system in Victoria. Annual rainfall in the valley is only 18 inches and the annual discharge has varied from 567,000 acre feet in a drought year to 6,202,171 acre feet in a particularly wet season. Total regulated supply is 960,100 acre feet, comprising 660,100 held in storages and 300,000 divertible direct from the river.

Water from Eildon Reservoir flows down the Goulburn for 150 miles to the Goulburn Weir, which raises the summer level of the river about 45 feet to 408 feet above sea level, where water is diverted to two main channels. The eastern main channel conveys water to four irrigation districts surrounding Shepparton and the western main channel fills Waranga Basin in addition to supplying the eastern portion of the Rodney Irrigation District.

Two main outlet channels issue from the Waranga Reservoir, one serving the Western part of the Rodney district; while the other serves districts as far west as Boort, and continuing to Beulah East, about 230 miles by channel from Waranga Basin or some 400 miles from Eildon, supplements the Wimmera-Mallee system.

Districts served comprise 202,400 acres east of the Goulburn; 608,350 acres between the Goulburn and Campaspe; 445,100 acres between the Campaspe and Loddon Rivers; and 79,900 acres west of the Loddon—a total of 1,335,750 acres. Main channels of the system have a total length of 213 miles and in addition there are 2,344 miles of distributaries, a total of 2,557 miles for the whole system.

The development of the fruit-canning industries in the Goulburn Valley is an index of the results of irrigation policy. Annual production from the Shepparton, Kyabram and Mooroopna canneries, together with that of city canneries—from Goulburn Valley fruit—aggregates 55,000,000 tins. This represents 79 per cent. of Australia's total production of canned peaches, pears and apricots. Other main products of the Goulburn districts are fat lambs, foddere, wine and table grapes and dairy products.

4. Murray River System. The waters of the River Murray are used to supply an area of more than 500,000 acres between Yarrawonga and Merbein, and channels totalling 1,450 miles are in service. The districts between Yarrawonga and Swan Hill, excepting Tresco, are supplied by gravitation and those down the river (Red Cliffs, Merbein, Nyah and Mildura) are supplied by pumping.

The Murray Valley Irrigation District, supplied from Yarrawonga, will serve 280,000 acres when completed. At 30th June, 1949, 380 miles of main and distributary channels were completed and supplied 111,500 acres west of Yarrawonga.

The gravitation system based on Torrumbarry Weir (52 miles downstream from Echuca) serves an area of 415,500 acres with 846 miles of supply channels. The weir raises the level of the river some 16 feet and enables water to be diverted throughout the year.

Red Cliffs Irrigation District comprises 31,000 acres. At present 11,541 acres are irrigated. This ranks first in importance among Victoria's pumping schemes. A system of main and distributary channels commands every holding in the district. The district, originally for soldier settlement, has been subdivided into 700 blocks. The area planted comprises 11,000 acres of vines and citrus. The first harvest (1924) returned 570 tons of dried fruit in addition to table grapes. The average harvest is now 18,000 tons of raisins, currants and sultanas as well as large quantities of grapes for dessert and distillation.

Merbein Irrigation District comprises 10,506 acres and contains 436 holdings averaging 24 acres each. A reticulated pipe system supplies the town of Merbein, and the pumps also supply the Yelta Waterworks District of 51,200 acres.

Nyah Irrigation District is supplied with water diverted from the Murray by a high-lift pumping plant, serving 3,800 acres in 220 holdings devoted mainly to orchards and vineyards.

5. First Mildura Trust District.—The First Mildura Irrigation Trust—which is the only Irrigation Trust operating in Victoria—controls an area of 44,000 acres, of which 12,937 acres are irrigated. This area irrigated includes 11,680 acres of vines, 871 acres of citrus trees and small areas of apricots, peaches, prunes, figs, almonds, olives, lucerne and other foddere. It produces approximately 15,000 tons of raisins, currants and sultanas each year. The irrigation water is pumped from the River Murray and distributed through 168 miles of channels.

6. Wimmera Mallee System.—The Wimmera-Mallee scheme is regarded as the most extensive domestic and stock supply system in the world. The main supply is drawn from the Grampians storages with a capacity of 206,710 acre feet. Supplementary water is drawn from the Goulburn channels and the Loddon River. The system serves an area of 11,000 square miles or nearly one-eighth of the State, which is largely devoted to wheat and pastoral industries. Without the artificial supply of water, development would be meagre.

Once a year, in the winter or spring, a volume of 85,000 acre feet of water is distributed through 6,600 miles of open channel and some 3,000 miles of farm channels. It is the responsibility of farmers to provide storages sufficient in size to meet their stock and domestic requirements for the ensuing year. At least 16,000 tanks are served. In addition forty-five towns with a total population of 40,000 obtain their water from the system. A total population of 80,000 depends upon the scheme. In the vicinity of Horsham and Murtoa, near the main storages, 3,000 acres are irrigated for soft fruits and pastures, but the limited water resources available will not permit any extension of irrigation.

The northern part of the system is affected by sand drifting into the channels, particularly in years of dry weather conditions, and the Commission is involved in substantial annual expenditures to remove this sand drift before the annual water distribution can be made. It is considered that this expenditure could be reduced by better farming methods, and efforts in this direction such as the sowing of rye-corn, and including the use of compulsory powers to prohibit the fallowing of land or burning of stubble within three chains of channels in light sandy country, have resulted in marked savings in maintenance costs.

7. *Farm Water Supplies.*—The Rural Finance Corporation Act 1949 is designed, *inter alia*, to give farmers an opportunity of establishing or improving domestic and stock water supplies on their farms. Water may be obtained from underground sources, from catchment and gully dams by diversion from existing streams and channels, by storage of sufficient water to meet a year's requirements and by installation of windmills or hydraulic rams.

A Farm Water Supplies Branch has been set up by the State Rivers and Water Supply Commission to advise farmers on farm water supply matters even if finance is not required. A comprehensive booklet entitled "Farm Water Supplies for Domestic and Stock Purposes" has been issued containing general advice on farm water supplies and plans of typical structures and layouts.

8. *Underground Resources.*—A comprehensive survey of the underground water resources of Victoria has been commenced. It will compile records of bores in the Mallee, Wimmera and Glenelg regions, and provide a detailed description of the Murray Artesian Basin. Investigations have also been made into the underground water resources of local areas such as Orbst Flats, Llowaleng Estate on the Avon River and at Bacchus Marsh where a number of observation bores have been installed.

The Murray Artesian Basin underlies an area of 107,250 square miles, of which 26,808 square miles are in Victoria, 28,269 square miles in South Australia and 52,173 square miles in New South Wales. The quality of the water varies in different parts of the basin. Over 300 bores exist in Victoria, with an average daily flow of 3,000,000 gallons. Bores range in depth from 50 to 3,000 feet.

9. *Future Programme.*—Victoria has now reached the stage when the demand for water is far greater than the supply, and a programme which envisages an expenditure of £25,000,000 has been launched. This includes the Rocklands storage on the Glenelg River (264,000 acre feet) and the Cairn-Curran Reservoir on the Loddon (120,000 acre feet). Investigations have also reached an advanced stage concerning a proposed enlargement of the Eildon Reservoir on the Goulburn from 300,000 to 2,350,000 acre feet by the building of a large earthen embankment 250 feet high and 3,300 feet long at an estimated cost of £12,000,000. This would be Australia's greatest storage.

10. *Hydro-electricity.*—The Kiewa project in the Australian Alps is one of the largest hydro-electric developments in Australia. The authority responsible for its construction and operation is the State Electricity Commission of Victoria. The Kiewa River is a tributary of the Murray. The project on which work is now in progress was authorized by the Victorian State Parliament in July, 1948, and will be two and a half times as large as the original project authorized by the Victorian State Parliament in 1937. It will comprise six power stations with a total installed capacity of 289,000 kilowatts and an average output over wet and dry years of 1,000 million kilowatt-hours of electricity per annum.

This major project of the State Electricity Commission of Victoria is based on an engineering plan, evolved after long years of close investigation, and includes the construction of seven reservoirs, five large dams and several subsidiary dykes, 18 miles of tunnels, 150 miles of water races, six power stations, two townships, many miles of roads, a 220,000 volt transmission line 152 miles long to Melbourne, and terminal receiving stations to feed the electricity produced into the Commission's distribution network.

The first of Kiewa's six power stations has been operating since 1944. Its installed capacity is 26,000 kilowatts and it is contributing annually between 40 and 50 million kilowatt-hours of electricity to the State system. The scheduled completion date of the whole project is 1956. The remaining five power stations to be built will come into operation as and when they are completed.

The Kiewa hydro-electric undertaking is one of the two principal developments in the State Electricity Commission's present construction programme which is designed to double the generating capacity of the State system within the next six years and double the annual output of electricity. The Kiewa undertaking will be complementary to the Commission's brown coal burning power station at Yallourn, which at present generates approximately 50 per cent. of all the electricity sold in Victoria and is now being extended to double, and later treble, its present capacity and output.

Further utilization is to be made by the State Electricity Commission of irrigation waters on the Goulburn River by the erection of a very much larger power station operating on the increased flow of water from the new Eildon Weir to be constructed by the State Rivers and Water Supply Commission of Victoria (*see above*). Plans for the new power station are now well advanced.

Irrigation waters from the existing Eildon Reservoir are already utilized to operate the 13,500 kilowatt Sugarloaf power station, which is the largest power station in the State Electricity Commission's Sugarloaf-Rubicon group of five hydro-electric power stations. With a total installed capacity of 26,400 kilowatts, this group has been in operation since 1928, and at present contributes on the average between 130 and 150 million kilowatt-hours of electricity per annum to the State system. Power is generated at Sugarloaf during the summer months when water is being released for irrigation, or at other times of the year when storage is full. The four associated mountain stream stations on the Rubicon and Royston Rivers generate maximum power in the winter and spring, when water flow is at its greatest.

Irrigation water will also be utilized at Hume Weir where a new power station will serve both Victoria and New South Wales. It is being erected by the New South Wales Public Works Department to designs and specifications prepared by the State Electricity Commission of Victoria. Initially, the installed capacity of the power station will be 50,000 kilowatts. Output of electricity, averaging about 200 million kilowatt-hours a year will be shared equally by the two States, each contributing its quota of the annual cost. Victoria's share of the electricity generated will be fed into the State system.

§ 4. Queensland.

1. *General*.—(i) *Rainfall*.—Particulars of the rainfall pattern of Queensland were given in Official Year Book No. 37, page 1122, and Chapter II.—Physiography of this issue contains information on climatic conditions in each State.

(ii) *Administration*. The first comprehensive Water Act in Queensland was the Water Act of 1926 which vested in the Crown the right to the use and flow of all streams, lakes, watercourses, etc., which flowed through or were within the boundaries of two or more occupiers, and also vested in the Commissioner of Irrigation and Water Supply the bed and banks of all boundary streams. The Irrigation Act of 1922 provided for the establishment of Irrigation Areas in approved localities. From 1922 to 1931 the Commissioner of Irrigation and Water Supply administered the Acts but in 1931 the Land Administration Board was appointed to act as the Commissioner and continued to act until the Irrigation and Water Supply Commission Act of 1946 was proclaimed in 1947. Under this Act the Corporation of the Commissioner of Irrigation and Water Supply was reconstituted. The Commissioner is responsible for carrying out the provisions of the Irrigation Acts 1922 to 1949 and the Water Acts 1926 to 1942. He is also responsible for investigations

into, and the planned development of water resources of Queensland under the Land and Water Resources Development Acts 1943 to 1946. For particulars of the New South Wales-Queensland Border Agreement ratified by Acts of both States in 1947 see page 1157.

(iii) *Water Utilization in Queensland.* Queensland's predominant interest in the past in the field of water conservation has been the provision of stock and domestic water supplies in its great pastoral areas which contain about half the Commonwealth's cattle, a sixth of the sheep and a third of the horses. More than half the State's rural production is derived from cattle and sheep. The cattle are distributed throughout the State, but most thickly between the east coast and the 20 inch average annual isohyet. Sheep are mainly pastured on the inland areas west of this isohyet, whilst dairying is concentrated in the south-eastern quarter of the State. In addition to the stabilization of water supplies in the pastoral areas and the provision of water along stock routes for travelling stock the development of irrigated pastures on the eastern seaboard for fattening stock adjacent to meatworks and markets has lately received much attention.

The State's agricultural crops differ from those of other States in that a large proportion is tropical. Sugarcane is the greatest individual crop, representing in value some 40 per cent. of total agricultural production. Approximately 11 per cent. of the sugar cane acreage is irrigated and represents some 55 per cent. of the total irrigated area in Queensland. Queensland is Australia's major tobacco-producing State, and plans are in hand to increase greatly annual production of this crop by means of development under irrigation.

2. *Great Artesian Basin.*—(i) *General.* Western Queensland beyond the 22 inch rainfall belt is predominantly pastoral and is mainly dependent for water supplies on artesian and sub-artesian bores, and where surface storage is not readily available, on excavated tanks. The Great Artesian Basin in Queensland corresponds approximately with the area lying west and south of the Great Dividing Range, but excluding the Cloncurry Mineral Field and the Barkly Tableland. It comprises 350,000 square miles of the total State area of 670,500 square miles. Statistics of bores and flow as at 31st December, 1949, are :—Artesian bores drilled, 2,175; artesian bores still flowing, 1,463; total depth drilled, 3,208,085 feet; deepest bore, 7,009 feet; total estimated flow, 221,484,000 gallons per day. Artesian pressure and flow are both steadily diminishing despite new bores drilled. The rate of diminution varies widely throughout the basin. Present general average rates of diminution are :—pressure, 1–2 feet/head, total flow $1\frac{1}{2}$ –2 per cent. per annum.

There are some 19,000 miles of bore drains and the greatest length served by one bore is 121 miles. This method of watering is somewhat wasteful, owing to evaporation and soakage, but it is the most economical in first cost. Not more than 5 per cent. of the water is actually used by stock, and present policy is to restrict working flows to serve limited drain systems of smaller dimensions and reduce evaporation and soakage losses. The average loss per mile of drain is 10,000 gallons per day; with smaller drains this is reduced to 7,000 gallons per day. Pipe lines are very rarely used for distribution owing to high initial cost.

Although artesian beds underlie such a large area of the State, only 87,500 square miles are primarily watered by bore drains. The remaining area is watered by artesian bores (with small or no flow and limited drains), sub-artesian bores, excavated tanks, dams and natural waterholes. In many districts, artesian bores are not economical watering facilities because of depth, limited area to be watered, and difficult terrain, for distribution of water by drains. High costs have restricted deep drilling. Very few new bores exceed 2,000 feet in depth, and a new bore greater than 3,000 feet in depth is exceptional.

Shallow sub-artesian supplies, of variable quality and volume, are available at depths less than 1,000 feet over a large area of the basin. These beds are not connected with the artesian beds. An essential practical consideration is that the main artesian beds are continuous and the sub-artesian beds are not continuous.

In 1939, a special Committee was appointed to enquire into the geology and hydrology of the Basin and economic use of artesian supplies. A first progress report has been issued by this Committee and its final report is now being prepared. It has been established that the rate of diminution of flow is declining.

In the past, many excavated tanks failed in dry seasons, because of insufficient original depth and capacity, and subsequent silting. Mechanical plant is now almost exclusively in use and much larger tanks are being excavated, even in areas where artesian water may be obtained at a reasonable depth. New tanks with capacities of 20,000 cubic yards and depths of 25 feet are not uncommon. Two tanks with capacities of 65,000 cubic yards each, and depths of 42 feet and 46 feet have recently been completed for watering stock in an area where a good artesian flow may be obtained at a depth less than 2,000 feet.

(ii) *Bore Water Areas.* The Constitution of Bore Water Areas was inaugurated in 1913 to aid pastoral settlement in districts where large flows were available at cost beyond individual capacity and to conserve artesian supplies by fully utilizing the flows from existing bores resumed with the land for closer settlement. Bores and drains are constructed from loan funds repayable over a period of years. The areas are administered by Local Boards or by the Commissioner of Irrigation and Water Supply, acting as a Board. Rates are levied to meet interest, redemption, maintenance and administration costs. Statistics for the year 1948-49 are:—Areas constituted, 66; administered by Commissioner, 46; administered by Local Boards, 20; area benefited, 4,994,326 acres; average rate per acre, 1.24d; number of flowing bores, 60; total flow, 29,434,000 gallons per day; drains served, 2,996 miles.

3. *Stock Route Watering.*—During 1935, a scheme was inaugurated to water adequately stock routes in the western portion of the State including main trunk routes connecting Eromanga to Burketown, Charleville to Normanton, and Clermont to Einasleigh, with branches to railheads, a total distance of 3,117 miles. Watering facilities were also provided on subsidiary routes. Under the Stock Routes and Rural Lands Protection Act of 1944 a co-ordinating board was constituted, representative of Government departments and pastoral interests, under the direction of the Minister for Lands, and with an officer of that Department as superintendent whose duty was, *inter alia*, to investigate and implement a long-range, co-ordinated plan for adequate watering of all stock routes throughout the State. Natural waters are being supplemented by artificial facilities at intervals of about 9 miles. Construction is supervised by the Irrigation and Water Supply Commission and by local authorities. Completed facilities are vested in local authorities for control and maintenance. From 1935 to 30th June, 1949, 208 facilities had been completed and at 30th June, 1949, 212 facilities were under construction or investigation.

4. *Irrigation.*—(i) *General.* Irrigation as a means of stabilizing and increasing agricultural production is receiving growing attention in Queensland. However, with the exception of the Theodore Irrigation Area, orthodox projects served by a channel system have not so far been developed, though construction of the Clare Irrigation Area on the Burdekin River is at present under way and investigations of several schemes are being carried out. Because of the large variations in both monthly and annual river flows major developments cannot be undertaken until large storage works are provided. Most irrigation in Queensland is performed by private farmers operating under licence, and obtaining water by pumping from streams or from natural underground storages. Where available, electricity is the most popular source of power for pumping; the principal areas supplied with electricity comprise the Burdekin Delta and the Lockyer Valley.

Furrow irrigation is used for cotton, sugar cane, and most tobacco and some other crops. Spray irrigation is adopted to a considerable extent for fruit, vegetables, fodder crops and a small part of the tobacco. Spraying is well suited to the application of water on deep soils by small pumping plants, particularly when the quantity of water available is limited. Experimental use of the border check method in the irrigation of pasture and fodder crops during the last two years has proved successful and may supersede other methods.

The following table shows for each division of the State the number of irrigators and the areas under irrigated culture for the year ended 31st March, 1949.

AREA OF LAND UNDER IRRIGATED CULTURE : QUEENSLAND, 1948-49.(a)

Division.	No. of Irrigators.	Area under Irrigated Culture. (Acres).							Total.
		Vegetables.	Fruit.	Sugar Cane.	To-bacco.	Cotton.	Other Crops.	Pastures.	
Southern Queensland ..	2,833	13,944	2,013	9,518	541	62	17,272	280	43,630
Central Queensland ..	261	704	173	..	14	65	2,036	143	3,135
Northern Queensland ..	1,153	2,922	666	39,635	898	50	400	81	44,652
Total	4,247	17,570	2,852	49,153	1,453	177	19,708	504	91,417

(a) Year ended 31st March, 1949.

The growth of irrigation is illustrated by the following figures for the total area of irrigated land :—1906, 9,922 acres ; 1916, 10,886 acres ; 1926, 24,250 acres ; 1936-37, 44,509 acres ; 1940-41, 60,961 acres ; 1948-49, 91,417 acres.

The pattern of irrigation in Queensland is dissimilar to that in southern States ; the more important developments in tropical and sub-tropical areas are therefore discussed briefly in the sub-sections following. It should be noted that the spring to autumn "irrigation season" of the temperate southern irrigated lands is not applicable, and that round the year irrigation is required throughout most of the State, the timing and duration of the summer "wet" season being too variable to enable a definite non-irrigation season to be fixed.

(ii) *Lockyer Valley.* West of Brisbane and within 50 miles of that metropolitan market is the Lockyer Valley, which is portion of the Brisbane River Basin. The Valley comprises an extensive flood plain where heavy black alluvial soil thickly overlies gravels and sands carrying water suitable for irrigation. Despite a mean rainfall of 30 inches the variation is great, and irrigation is necessary for continuous agricultural production. Recent surveys suggest that some 60,000 acres of land highly suitable for irrigation are available. By June, 1948, 16,000 acres of the Valley were under irrigation, the number of pumps operating from wells and open water exceeding 550 and 500 respectively. Over 60 per cent. of the farmers operate electric pumps for irrigation purposes and a special policy designed to encourage such development is fostered by the City Electric Light Company which serves the Valley. The Irrigation and Water Supply Commission has constructed a number of small weirs on Lockyer Creek with a total storage of 1,370 acre feet. These also tend to augment and conserve underground supplies. To study local problems an Irrigation Research Station was established at Gatton in 1946 by the Bureau of Investigation.

The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

(iii) *Burdekin River.* The Burdekin River, which joins the sea between Townsville and Bowen is a major factor in the life of North Queensland. In most years heavy floods from a catchment twice the size of Tasmania cause extensive damage and traffic disabilities. On the other hand, the fertile delta area with its underground water supplies at shallow depth has contributed greatly to the agricultural prosperity of North Queensland. The projected irrigation, hydro-electric and flood mitigation scheme, together with the high level railway bridge at present under construction will change the Burdekin from a mixed blessing to one of the Commonwealth's greatest resources for agricultural and industrial production. Present development is confined to the Delta Area. The average annual rainfall of this area is some 41 inches, but the major part falls in the months December to March. Consequently sugar growers and other farmers have tapped the underground water resources of the Delta to obtain supplies in the dry periods

Sugar is the main irrigated crop, though citrus, pineapples, vegetables and tobacco are also irrigated. The irrigated area is in excess of 30,000 acres, up to 1,000 acre-feet of water being drawn daily from underground sources.

In the Home Hill-Inkerman areas on the south side of the Burdekin, water is obtained from shallow wells by electric pumps supplied from a local power station now controlled by the Townsville Regional Electricity Board. Around Ayr on the north side of the river electric power from the mains of the Townsville Regional Electricity Board is now being adopted in place of the individual internal combustion engines previously used. At both Home Hill and Ayr water for domestic supply is raised by a windmill on each property.

In 1940 the Burdekin River Trust was formed to safeguard the sugar areas of the Delta from erosion and floods. An Irrigation Research Station has recently been established to study the development of pastures and irrigated crops under local conditions.

A major multi-purpose scheme, involving irrigation, flood control and hydro-electric power generation is being investigated. The development envisaged would include a dam storing some 4,000,000 acre-feet which would make water available for the irrigation of at least 250,000 acres. The principal industries anticipated are tobacco-growing, dairying and cattle fattening with sorghum, sunflowers, peanuts, cotton and sugar cane as other possible forms of production.

The recently constituted Clare Irrigation Area is at present being developed for tobacco production. Located from 25 to 37 miles upstream from the mouth of the Burdekin, this area comprises some 6,000 acres which will obtain irrigation water from central pumping stations drawing initially on the unregulated river flow of the Burdekin. This development is a first step in the major Burdekin scheme.

(iv) *Dawson Valley.* The Dawson River, a 392-mile long tributary of the Fitzroy River, rises in the Carnarvon Range and joins the Mackenzie River to form the Fitzroy some 50 miles west of Rockhampton. Lands bordering the river in its northerly course of about 170 miles before its confluence with the Mackenzie River are commonly termed the Dawson Valley. A scheme for the development of the Dawson Valley under irrigation was inaugurated in 1923, providing for the irrigation of some 70,000 acres. Storage for the scheme was to be provided by a dam at Nathan Gorge of some 2,000,000 acre feet capacity. Much investigational and survey work on the scheme was carried out, but the general financial depression and limited loan funds brought about the cessation of this work. However, the initial step in construction had been completed, comprising a weir on the river at Theodore and irrigation works to serve an area of some 3,500 acres supplied from a central pumping station. An additional weir has since been built, giving a total storage of 11,000 acre-feet. Pasture, vegetables, cotton, fruit and dairying products are the principal produce. A cheese factory has been established at Theodore, and with the increase in dairying based on irrigated lucerne and pasture, the future of the area appears assured. Attention has recently been given to the former plans for the Valley and earlier work is now under close scrutiny as a prelude to future development.

(v) *Walsh-Barron Tobacco Lands.* The Walsh and Barron Rivers rise in the Great Dividing Range some 50 to 60 miles south-east of Cairns. Sandy soils suitable for tobacco are to be found in the valleys of these rivers in the neighbourhood of Marceba and Dimbulah. Surveys indicate that 40,000 acres of land suitable for irrigated agriculture are available, including 32,000 suitable for tobacco. At present some 800 acres of high grade tobacco are grown annually, together with small areas of vegetables and fruit. Five weirs of combined capacity of 1,480 acre feet are being provided on a number of streams to store water for irrigation. Full development of the area is dependent on the provision of a major dam at Nullinga on the Walsh River, and possibly at Tinaroo Falls on the Barron River and the construction of these dams is being investigated. Tobacco would be the basic crop, whilst peanuts, vegetables, broom-millet, maize, citrus, cotton, and giant cowpeas may prove suitable subsidiary crops. Should pastures be established as a rotational sowing for tobacco, cattle fattening might also be introduced.

(vi) *Border Rivers Project.*—The development of the rivers constituting portion of the border between Queensland and New South Wales is under the authority of a Border Rivers Commission on which each State is represented (*see* page 1157). A scheme has been formulated which entails the construction of a large dam at Mingoola which would supply irrigated land in each State by diversion and channel systems. The principal crop of the Queensland area would be tobacco, with pastures and fodder crops for dairying and fat lamb raising as rotational plantings and on lands unsuitable for tobacco. This project will provide for the stabilization and enlargement of the existing South Queensland tobacco lands, which at present comprise an annual planting of some 1,800 acres of irrigated tobacco. Small areas of pastures, fodder and fruit are also grown. Supplies are obtained principally from unregulated stream flow, though weirs under construction will afford a measure of stability of supplies for existing growers.

5. *Bureau of Investigation.*—Under the Land and Water Resources Development Act of 1943 a Bureau of Investigation has been set up for the co-ordinated investigation of land and water resources development.

The Bureau consists of representatives from the authorities controlling water resources, lands and agriculture under the chairmanship of the Co-ordinator General of Public Works. Among notable work carried out by the Bureau of Investigation since its inception has been the trial planting of irrigated pastures with a view to developing mixtures suited to the special conditions of each part of the State. Other valuable work has included the mapping of the ultimate land uses of the State, and the detailed investigation of the agricultural and pastoral potentialities of many regions.

6. *Channel Country.*—Extensive investigations of the Channel Country fed by inland rivers in the south-western corner of the State have been made by the Bureau of Investigation. This country is intersected by shallow and irregular flood channels through which huge volumes of flood waters pass in favourable seasons; consequent on the flooding a heavy growth of natural pastures is produced on the flooded lands, providing feed in quantities far in excess of that required for the normal stock population of the area. If the occurrence of flooding could be made more reliable by means of storages to create artificial floods, the pastoral resources of the area would be enormous. However, inquiries directed on these lines have revealed that little can be done to increase or stabilize the turn off of fat cattle by artificial storage, but that improved transport facilities are essential and are proposed.

7. *Bradfield Scheme.*—Detailed discussion of the scheme proposed by the late Dr. J. J. C. Bradfield for overcoming natural climatic disabilities of the Lake Eyre Basin (South Australia) and Western Queensland will be found on page 1128 of Official Year Book No. 37.

8. *Hydro-electricity.*—Behind the coastal plain of the Cairns-Ingham area is an extensive plateau, the elevation ranging from 2,000 to 3,000 feet although isolated peaks exceed 4,000 feet. The short coastal streams which rise on the plateau descend rapidly into deep gorges, which they have cut through the old divide. With heavy monsoonal rainfall on their catchments and concentrated fall, these streams represent a considerable potential source of power, but storage, which can in most cases be provided, is essential to control the very variable flow.

The Barron Falls Scheme, 14 miles north-west of Cairns, came into operation in 1935. The installed plant operates under a head of 410 feet and comprises three 2,000 h.p. turbines each connected to a 1,320 k.w. generator. Average rainfall varies from 80 to 150 inches along the ranges to less than 35 inches in the western portion of the catchment. There is extreme variation from year to year, resulting in great fluctuation of stream flow which, at Kuranda, has varied from a maximum of 117,000 cusecs in 1911 to a minimum of 30 in 1915. Storage to regulate the flow is possible but has not yet been provided. During periods of low flow the supply of electricity is supplemented by fuel plants at Cairns, Atherton, and Innisfail. Power is distributed over 22,000 volt transmission lines serving the tableland and extending southward along the coast to Tully.

A small hydro-electric scheme on the Mossman River, 5 miles from Mossman, North Queensland, comprises two 120 h.p. turbines operating under a head of 200 feet.

An immediate commencement is to be made on the construction of a hydro-electric power scheme at Tully Falls. Water controlled by Koombooloomba Dam to be built on the upper Tully River will be diverted, a short distance above Tully Falls, through a tunnel and steel penstocks to pelton driven generators under a head of 1,485 feet. Ultimate installation will be four 18,000 k.w. sets, two of which will be installed initially. Future automatic power plants upstream and downstream from Tully Falls will consist of two 7,500 k.w. sets under 405 feet head and one 5,400 k.w. set under 230 feet head. The combined peak load for the three plants will be 69,000 k.w.

Other northern schemes which have been investigated include Freshwater Creek (3,900 k.w.); North Johnstone-Russell Rivers (32,000 k.w.); Beatrice-North Johnstone Rivers (9,000 k.w.); South Johnstone River (25,000 k.w.); extension of Barron Falls scheme (22,000 k.w.); Herbert River (90,000 k.w.). The total potential of the plateau region is therefore about 250,000 k.w. at 50 per cent. load factor.

A power plant immediately below the Burdekin Falls Dam of the proposed Burdekin River Irrigation Scheme will operate under an average head of 225 feet. The output of firm power will depend upon the varying demand for water for irrigation but it is expected to average about 50,000 k.w.

South of the Burdekin River no appreciable hydro-electric development is practicable. A plant of 3,200 k.w. capacity is being installed to utilize the outflow from Somerset Dam on the Stanley River a few miles above its confluence with the Brisbane River.

§ 5. South Australia.

1. *General.*—(i) *Rainfall.* Brief particulars of the climatic conditions in South Australia were given on page 1129 of Official Year Book No. 37, and Chapter II.—Physiography of this issue contains information on the climatic conditions in each State.

(ii) *Administration.* Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department which administers the Water-works Act governing the supply of water through mains in water districts for townships and farm lands. The Water Conservation Act provides for the construction of storages in non-reticulated areas and authorizes the Minister to “divert and impound the water from any streams or springs or alter their courses, and take water therefrom, or any other waters as may be found in, under or on any land entered upon for the purpose of supplying water to the inhabitants of any water district”.

(iii) *Methods of Catchment and Conservation.* Early steps were taken to vest all running streams, springs and “soaks” in the Crown. Since the Water Conservation Act was passed in 1886 more than 550 dams, tanks and “rainsheds” have been built or acquired by the State, in addition to 460 wells and 340 bores, at a total cost of £1,263,752. The rainsheds comprise timber frameworks roofed with galvanized iron to catch precipitation which is delivered to storage tanks. Rainshed catchments vary from a few hundred square feet to four acres, discharging water into tanks ranging in capacity from 2,000 to 500,000 gallons. Over most of the State extraordinary precautions are taken to counteract evaporation. Pipelines in preference to open channels are used to reduce seepage and evaporation. Meters are attached to practically all services to check usage by individual consumers.

2. *Irrigation.*—In South Australia irrigation is almost exclusively confined to the Murray Valley. Except for that held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped on to the land or gravitated from the river. The upper Murray of South Australia and the Mildura area of Victoria formed the cradle of Australian irrigation. South Australian irrigation commenced with an agreement between the Government and the Chaffey Brothers (*see* page 1149) in 1887 whereby 250,000 acres at Renmark were made available for irrigation settlement. Exclusive of land being developed for War Service Land Settlement purposes the Department of Lands administers an area of 26,959 acres of irrigable high land, together with 9,410 acres of reclaimed swamp and 163,491 acres of non-irrigible land in the irrigation areas

In addition the Renmark Irrigation Trust controls 20,557 acres of which more than 8,000 are irrigated. Water used for irrigation in 1949 in the area controlled by the Department of Lands was approximately 120,000 acre feet. In the Renmark area water used for irrigation in 1948-49 was 29,000 acre feet. The production of the upper Murray areas is almost exclusively fruit and vines. Principal crops are sultanas, currants, lemons, apricots, peaches, nectarines, pears and figs (mainly for dried fruit), wine grapes, and citrus fruits. Before irrigation, these semi-arid lands were of little productive value. The following tables show the acreage devoted to various crops in the government controlled and Renmark Irrigation Trust areas on the upper Murray, and in the government controlled reclaimed swamp districts near the mouth of the Murray which are devoted to dairying.

IRRIGATED AREAS : SOUTH AUSTRALIA, 1948-49.

(Acres.)

Area.	Vine Fruits.	Tree Fruits.	Citrus Fruits.	Lucerne.	Other Fodders.	Total.
Orchard land—						
Berri	5,557	603	1,006	38	..	7,204
Cadell	653	97	83	40	..	873
Waikerie	2,056	358	973	37	..	3,424
Cobdogla	3,922	104	148	15	..	4,189
Moorook	409	101	144	16	..	670
Kingston	287	76	171	..	..	534
Mypolonga	33	327	437	..	..	797
Chaffey	807	26	6	3	..	842
Total	13,724	1,692	2,968	149	..	18,533
War Service Land Settlement—						
Loxton	74	154	472	..	..	700
Loveday	220	31	15	..	..	266
Grand Total	14,018	1,877	3,455	149	..	19,499
Renmark Irrigation Trust						
.. ..	7,240	606	645	..	..	8,491
Reclaimed Swamp Land—						
Monteith .. ..	..	..	..	..	923	923
Mypolonga .. ..	..	..	..	68	1,091	1,159
Wall .. ..	..	..	..	12	486	498
Burdett .. ..	..	..	..	2	99	101
Mobilong .. ..	..	..	..	50	314	364
Long Flat .. ..	..	..	..	..	362	362
Neeta .. ..	..	..	..	..	546	546
Pompoota .. ..	..	..	..	9	415	424
Cowirra .. ..	..	..	..	33	543	576
Jervois .. ..	..	..	..	75	3,524	3,599
Total .. ..	..	..	..	249	8,303	8,552

Total population of the upper Murray Irrigation Areas in South Australia is approximately 17,000 and 1,500 persons are settled on the reclaimed areas. The latter figure does not include the population of adjacent towns outside the area, but closely associated therewith.

The expenditure incurred by the Government to the 30th June, 1949 in purchase of land, reclamation of swamps, preparation of irrigable lands for fruit growing, and purchase of pumping plants for drainage and water supply is approximately £4,708,000. Further irrigation development is being undertaken as a part of the Commonwealth-wide War Service Land Settlement Scheme. South Australia's share of a total of 32,000 acres of horticultural plantings under the Scheme is 10,000 acres, comprising citrus, 3,500 acres, vines, 5,300 acres, and deciduous tree fruits, 1,200 acres. Schemes already approved and under construction will absorb between 7,000 and 8,000 acres, and further areas are being selected to take up the balance. Holdings will be provided for about 380 settlers, and annual production from the 10,000 acres of plantings mentioned is estimated at:—Citrus, 1,000,000 cases; deciduous tree fruits—dried, 800 tons, fresh, 2,300 tons; dried vine fruits, 5,600 tons, wine grapes, 12,800 tons. On present-day prices, the value of this production would approximate £900,000.

Renmark Irrigation Trust is administered by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold, self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains 80 miles of channel for the reticulation of 8,491 acres.

3. *Country Water Supply Schemes.*—(i) *Summary.* Water conservation and distribution works in South Australia have cost £23,442,000 (exclusive of river control and irrigation works on the River Murray which are dealt with above). A summary of statistical information concerning country supplies in 1948-49 follows:—Length of water mains, 5,457 miles; capacity of storages, 9,500 million gallons; approximate population served, 225,000; area served, approximately 4,000,000 acres; and total capital cost, £16,819,000.

Areas extending for a distance of 90 miles north of Adelaide are supplied from the Warren and Barossa Reservoirs in the Barossa Ranges, and agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, with a connexion to the Warren system. Eyre Peninsula has, up to the present, been supplied from the Tod River Reservoir (9,167 acre feet) and three small reservoirs near the Franklin Harbour District, but demands have increased to such an extent in recent years that further sources of supply are necessary and with this end in view a water-bearing area known as the Uley-Wanilla Basin has been developed, and water from it is now being used in the Tod River system.

(ii) *Morgan-Whyalla Water Supply Scheme.* For particulars of the construction and works of the 223-mile pipe line bringing water from the Murray at Morgan to Whyalla on Spencer Gulf see Official Year Book No. 37, page 1132. The Morgan-Whyalla Water Supply Scheme forms part of the South Australian Country Water Supply system referred to above.

4. *Underground Water.*—The occupied portion of South Australia is, on the whole, well endowed with underground water. The extent of the several artesian basins is tolerably well known. There are also considerable areas, notably in the south-east of the State, in which ground water occurs. Quality varies widely, but a great deal is at least useful for watering stock, the major use to which it is put. Apart from numerous boreholes and wells tapping underground water for farms, stations and towns, two notable basins are being developed on Eyre Peninsula—one at Flinders (Streaky Bay) and the other at Uley-Wanilla, near Port Lincoln. Leigh Creek coalfield, some 350 miles north of Adelaide, derives its supply from a borehole at Sliding Rock mine, the water being pumped through a pipeline 25 miles long.

The deepest portion of the Great Artesian Basin (in the north-east) is not extensively developed because development costs are large in proportion to the carrying capacity of the arid land. Deep boreholes have been drilled by the Government, however, to provide watering places along stock routes, and pastoralists rely largely on supplies in suspended basins at shallower depths.

The use of the waters of the Murray Basin is essential to settlement in the Murray Mallee country and in the south-east, especially for farms, but also for township supplies for Mount Gambier, Naracoorte, Bordertown and Pinnaroo. The maximum depth of boreholes is 235 feet and the minimum 71 feet. Average tested yield is 14,808 gallons per day.

Pastoralists, farmers, market gardeners and others have been assisted with expert advice on drilling, for which the Government maintains about 40 drills. A large area within the Murray River Basin has been examined critically to ascertain the extent of land which could be used for lucerne and an examination of a large part of Kangaroo Island and Southern Eyre Peninsula is being made in connexion with Soldier Settlement schemes.

The results of comprehensive surveys of underground supplies undertaken by geologists of the South Australian Government have been published in the State's geological survey bulletins in recent years.

5. *Farm Water Schemes.*—While the Department of Mines and the Engineering and Water Supply Department give assistance to individual farmers in the provision of supplies from underground sources, a great part of the farming areas derive water supply under pressure from the extensive distribution systems connected to various reservoirs or the Murray River.

6. *South-Eastern Drainage.*—For some information on the drainage schemes necessary for the disposal of surplus water in areas in the south-east of South Australia see Official Year Book No. 37, page 1133.

§ 6. Western Australia.

1. *General.*—(i) *Rainfall.* Brief particulars of the climatic conditions in Western Australia were given on page 1133 of Official Year Book No. 37, and Chapter II.—Physiography of this issue contains information on the climatic conditions in each State.

(ii) *Administration.* Irrigation districts are administered under the Rights in Water and Irrigation Act of 1914-1945 and the Government is advised by an Irrigation Commission representing the local irrigationists and government technical and financial branches. The Goldfields Water Supply is administered by a branch of the Public Works Water Supply Department and its responsibilities include control of water from this scheme for agricultural purposes. The metropolitan water supply is controlled by a separate department under the control of the Minister for Water Supply, Sewerage and Drainage. Under the Water Boards Act (1904) seventeen towns are administered by local water boards and nineteen are under direct Ministerial control. The Minister also controls three District Farming Schemes. Water rights over water flowing in streams and water courses is vested in the Crown unless specifically appropriated for irrigation purposes under the irrigation legislation.

2. *Irrigation.*—The main irrigation districts—Harvey, Waroona and Collie—are along the south-west railway line between Waroona (70 miles from Perth) and Dardanup (116 miles from Perth). The total area irrigated in these districts during 1948-49 was 16,691 acres and the total water used was 50,937 acre feet. The total acre waterings (i.e. the number of acres watered multiplied by the average number of waterings) was 79,666 and the number of holdings 428.

Harvey Districts (Nos. 1 and 2—32,663 acres) are supplied from the Harvey Weir (8,300 acre feet) and Stirling Dam (44,344 acre feet), Waroona District (10,325 acres) from Drakesbrook Dam (1,855 acre feet) and Samson's Brook Dam (6,540 acre feet), and Collie District (28,762 acres) from Wellington Dam (27,800 acre feet).

The following table, which shows acre waterings supplied to crops in the irrigation districts of Harvey, Waroona and Collie during the seasons 1938-39 and 1944-45 to 1948-49, illustrates the growth of these irrigation schemes.

IRRIGATION, WESTERN AUSTRALIA : ACRE WATERINGS.

Year.	Pasture.	Fodder.	Potatoes.	Vegetables.	Orchard.	Flax and Broom Millet, etc.	All Crops.
1938-39	31,049	934	3,142	692	922	..	36,739
1944-45	50,748	453	5,363	2,543	1,107	66	60,280
1945-46	57,707	995	4,269	2,915	1,176	209	67,271
1946-47	61,948	547	4,304	3,209	1,096	..	71,104
1947-48	57,450	508	3,714	3,433	1,190	..	66,295
1948-49	71,687	640	2,692	3,562	1,085	..	79,666

3. *Water Supply Schemes.*—(i) *Goldfields Scheme.* Western Australia has one of Australia's most spectacular water supply schemes and a brief account of its development will be found on page 1134 of Official Year Book No. 37, and an account in greater detail on page 576 of No. 6. Mundaring reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the goldfields, and has a capacity of 4,650 million gallons and a catchment of 569 square miles. The enlargement of the reservoir to 15,000 million gallons by raising the dam a further 32 feet is in progress and expected to be complete in 1951. The water now passes through 430 miles of steel main, mostly of 30 inch diameter, aided by eight pumping stations, involving a total net lift of 1,280 feet.

Hundreds of miles of branch mains and pipes have been laid to mining districts, towns and farming districts, the most important being the Norseman extension of 101 miles. The system serves 34 towns and water is reticulated to 970,000 acres of farming lands. Total length of mains is 1,773 miles and the population served is 50,000. Total quantity of water pumped from Mundaring in 1948-49 was 2,410 million gallons. Total cost of system to the end of 1948-49 was £6,614,390.

(ii) *Rock Catchments.* An interesting feature of the State's conservation system is found in the Barbalin, Narembeen and Kondinin District Farming Land Schemes in the wheat belt, where extensive granite outcrops have been used as catchments. The rain is caught at the foot of the rocks, and pumped to tanks from which the water is reticulated to farms and to a number of small towns. For further particulars see Official Year Book No. 37, page 1135.

(iii) *South-west Scheme.* The Commonwealth Government has agreed to assist a scheme to extend water for agricultural areas and towns in the south-west of Western Australia, which will be administered by the State Government. It is estimated that the scheme will cost £4,300,000 of which the Commonwealth will contribute £2,150,000. The scheme provides for raising the height of the Mundaring Weir and the Wellington Dam to increase the storage capacity of these reservoirs to 15,000 million gallons and 38,000 million gallons respectively, and for increasing the capacity of pumping stations on the Goldfields pipeline to permit water diversions from that source. Twenty-three towns and over 4,000,000 acres of agricultural country will benefit. Work has been commenced on the pipe line from Wellington Reservoir to Narrogin.

4. *Underground Water.*—Individual farmers, orchardists, market gardeners and others derive water from wells or windmills wherever available, and, where power is available, pumps and motors are used to tap such supplies. The Department of Public Works has twelve boring plants which are lent out to farmers to facilitate boring operations to an average depth of 150 feet. The Department also contracts with private firms to bore for communal farm supplies. During the past 50 years 298 artesian and sub-artesian bores have been sunk, mostly for private purposes. The total depth of all recorded bores in Western Australia is 243,612 feet; daily flow is 81,418,500 gallons; and the average depth at which water is struck is 819 feet. Maximum depth of any bore is 4,006 feet and minimum 21 feet.

5. *Ord River Scheme.*—The Ord River in the north-west of Western Australia traverses a tropical area served with monsoonal rains of irregular incidence and quantity, varying from 20 inches in the south to 30 in the north. The hottest months (December to March) are also months of highest rainfall. Communications and population are

sparse. The Western Australian Government is considering a proposal to build a dam to conserve 2,000,000 acre feet of water, equipped with hydro-electric plant, which might supply irrigation water for an area of 100,000 acres if investigations show that the climate and soil conditions are suitable for vegetables, tropical fruits and rice. However, the economic production of these and other crops, as well as the possible use of such irrigation areas for interim fattening of cattle, is being examined at the Kimberley Research Station on the Ord River.

§ 7. Tasmania.

1. *General.*—(i) *Rainfall.* Brief particulars of the rainfall pattern in Tasmania were given on page 1136 of Official Year Book No. 37, and Chapter II.—Physiography of this issue contains information on the climatic condition in each State.

(ii) *Main Purposes of Conservation and Utilization.* Owing to its fortunate rainfall position, scarcity of water is not a serious problem in normal seasons. Conservation of water for hydro-electric generation is the predominant interest, and conservation for domestic and industrial purposes is more important than irrigation. Conservation of water on farms is not practised to the same extent as on the mainland, probably because running streams and good rainfall are on a more generous scale. Provision of artificial storages (apart from house tanks) is rare. Underground water is of poor quality and a small quantity exists over an area in the Midlands which has been exploited to a limited extent only by bores and windmills. Geological conditions do not appear to favour the utilization of ground water except on a minor scale. There is only one known flowing bore—at Speyrtton, which yields 1,690 gallons per hour.

(iii) *Administration.* The State does not own all natural waters as in Victoria, and consequently the subject of water rights is a difficult one. The Mines Department has power to grant certain rights for mining operations, and the Hydro-Electric Commission must approve the abstraction of water from any stream or lake of potential value for power generation. There is no machinery other than the Courts for deciding the issue in cases where municipal councils or private individuals propose to divert water for town supplies or irrigation from streams in which neither of these two authorities is interested. The only exceptions are a few municipal and industrial undertakings which have statutory rights.

2. *Hydro-electricity.*—Tasmania depends entirely on water for power development, and its power potential has been estimated at 3,500,000 h.p. on the basis of 50 per cent load factor and 80 per cent turbine and generator efficiency. The Hydro-electric Commission, the authority controlling the generation of electricity in Tasmania, provides most of Tasmania's power requirements from three schemes—the Waddamana, Tarralcah and Shannon. The Mount Lyell Mining and Railway Co. Ltd. also operates a 10,000 k.w. plant at Lake Margaret on the west coast to serve copper mines, and this station is interconnected with the Commission's network. Small stations operated by tin mining companies have a total capacity of 2,000 k.w.

Only a brief description of the major schemes is given below.

The Waddamana scheme was completed in 1916 with an original capacity of 10,000 h.p., since increased to 66,000 h.p. Waddamana B was completed in 1944 with a capacity of 33,400 h.p. and since that date the total has been increased to 66,000 h.p.

In the Shannon scheme water from the Great Lake passes down the Shannon River to the Shannon Power Station by pipeline and canal, where 14,500 h.p. is generated before the water passes into the Waddamana canal and power station.

Both the Waddamana and Shannon power stations derive their energy from the Great Lake, practically in the centre of the island, with an elevation of 3,380 feet above sea level.

The Tarralcah scheme is situated on the Nive River, but is served by water from the River Derwent and Lake St. Clair. The water from Lake St. Clair flows down the Derwent to Butler's Gorge, where a 200 feet high concrete dam (Clark Dam) will impound 243,000 acre feet of water. At the foot of the dam Butler's Gorge power station is being

built to develop 17,000 h.p. Water discharged from Clark Dam will continue down the River Derwent and will be diverted into the Tarraleah Canal and thence into Tarraleah Lagoon for use in the Tarraleah power station, the capacity of which will be increased from 105,000 h.p. to 126,000 h.p.

Work has commenced on the Nive Scheme in which a dam will divert the headwaters of the Nive, Pine and Serpentine Rivers into a chain of lakes. These lakes will be formed by constructing levees across the outlets of Woodward's, Brady's, Big and Nive Marshes, and they will provide 62 cusec-years of storage. Water will then be conveyed by a tunnel and penstocks to the Tungatinah power station which will have an ultimate capacity of 140,000 h.p. As a further stage of this project a dam across the River Dee at the outlet from Lake Echo will provide about 300 cusec-years of storage which will be used to augment the storage in Brady's, Big and Nive Marshes.

Preliminary work has commenced on the Trevallyn power development scheme. A power station with an ultimate capacity of 84,000 h.p. will be built near Launceston, utilizing water from the Lake, Macquarie, South Esk and Meander Rivers. Upon completion of this project Duck Reach power station will go out of service.

The following table shows, as at the end of 1949, the development of Tasmania's hydro-electric power resources:—

HYDRO-ELECTRIC POWER RESOURCES : TASMANIA.

Name.						Installed Capacity.	Ultimate Capacity.
						K.W.	K.W.
Waddamana	..	..	..	..	..	97,000	97,000
Shannon	..	..	..	..	..	10,500	10,500
Tarraleah	..	..	..	..	..	75,000	90,000
Clark Dam (Butler's Gorge)	..	..	..	..	..	Nil	12,000
Launceston (Duck Reach)	..	..	..	..	..	2,000	2,000
Trevallyn	..	..	..	..	..	Nil	63,000
Tungatinah	..	..	..	..	..	Nil	125,000
Lake Margaret	..	..	..	..	..	10,000	10,000

3. **Industrial.**—Three principal industrial schemes have been installed privately. The Australian Newsprint Mills pump approximately 6,000,000 gallons a day from the Derwent River at Lawaitta for the Boyer mills. Associated Paper Mills pump several million gallons a day from Huu River at Burnie, and Titan Products Pty. Ltd. reticulate water from Chasm Creek to their factory at Weybridge. Potential sources capable of greater development without storage exist on the Derwent, South Esk, Huon, Lake Mersey and Forth Rivers. There is also a great reserve of untapped permanent streams in the western half of the State, at present largely unsettled. Diversion to the eastern side of the watersheds is regarded as practicable.

4. **Irrigation.**—There are no State irrigation projects and none is envisaged in the near future. All systems operating are privately owned and, with one exception (at Bushy Park), are single farm units. At Bushy Park a small system serves a group of properties. The larger proportion of the area under irrigation is watered by gravitational systems and the remainder comprises areas devoted to vegetables and served by municipal water supplies. Irrigation, as practised in Tasmania, was applied in 1948-49 to 9,563 acres devoted to: hops (1,249 acres); fruit (1,046 acres); pastures (6,851); green fodder, etc. (145 acres) and other crops (278 acres).

§ 8. Northern Territory.

1. **Climate and Topography.** Some particulars of the climate and main topographical features of the Northern Territory were given on page 1138 of Official Year Book No. 37, and in this issue information on climatic conditions will be found in Chapter II.—Physiography, and a brief outline of contour and physical characteristics in Chapter X.—The Territories of Australia.

2. **Administration.**—Under the Control of Waters Ordinance (1938) of the Northern Territory natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and diversion of water is prohibited except under conditions prescribed.

3. **Underground Water.**—Artesian water is found mainly in the south-east where the Great Artesian Basin enters the Territory. Pastoral (beef) production accounts for the bulk of the Territory's income, and the marked seasonal conditions affect the industry's economy. During the wet summer season there is adequate water, but during the winter most natural watering points disappear, and pastures dry. Bores supplement the permanent watering points which are mainly along river frontages. The cattle industry is concentrated in the area in which the feed retains an appreciable nutritive value during the winter despite the dry conditions. This area is not in the wetter coastal regions, but in the inland belt of 15 to 25 inch rainfall and to the north of Alice Springs. Lack of bores is a limiting factor in the industry's economy, as cattle are able to thrive only within certain distances of reliable water.

Some 600 bores have been recorded, but complete records are not available. Maximum depth is more than 600 feet. For further information see Official Year Book No. 37, page 1139.

4. **Irrigation.**—There are no large-scale water conservation projects in the Territory with the exception of the Manton Dam (80,350 acre feet) which serves Darwin with a reticulated supply. Irrigation has therefore assumed no current importance. For particulars of present activity and potentialities see page 1138 of the previous issue.

§ 9. Papua and New Guinea.

1. **Rainfall.**—When all localities (32 stations) where gauges are kept, are taken into consideration, the average annual rainfall, over periods varying from two to ten years, is about 159.21 inches. This figure includes both inland and coastal stations. Mean annual rainfall for the inland stations, which average 786 feet in height, is 134.77 inches and for coastal stations, 83.66 inches.

2. **General.**—For a general description of these territories see Chapter X.—“The Territories of Australia”, pages 365, 367 and 372 of this Year Book. Irrigation has not been developed on any organized basis owing to the availability of high rainfall and the nature of agricultural development. The main water conservation interest in New Guinea at present is the hydro-electric potential.

Those portions of New Guinea administered by Australia are well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to 13,000 feet. Complete data concerning water resources are not available, but it is known that the opportunities for production of hydro-electric power are extensive. Some authorities estimate that 20,000,000 h.p. could be generated. Present investigations have been limited to those areas where a demand for power is likely to arise. New Guinea has a substantial native population and few major industries.

Explorations over the southern portion, known as Papua, have resulted in the collection of much information concerning water resources. The largest stream is the Fly River, at least 500 miles long, which is situated in the western division. Its large tributaries extend to the northern boundary of the Territory rising among lofty mountain ranges. Records show that at a point above the tidal influence, where the river is 600 yards wide and 40 feet deep, the stream travels at a rate of $3\frac{1}{2}$ miles per hour and discharges 105,200,000 gallons per minute. All the principal rivers flow from the main range in a southerly direction. Most of them carry a large volume from a great height over relatively short distances. They have a total catchment of about 50,000 square miles having an elevation between 2,000 and 13,000 feet. The Government Geologist has estimated that if only 50 per cent. of the annual rainfall were utilized through a height of only 500 feet a total of 8,500,000 h.p. would be produced.

CHAPTER XXVI.

DEFENCE.

§ 1. Department of Defence.

1. **Introduction.**—At the outbreak of the 1939–45 War, the Department of Defence comprised the three Fighting Services. In November, 1939 separate Departments, each with its own Minister, were created for the control and administration of the Navy, Army and Air Force. The Defence Department as then reconstituted retained responsibility for over-all defence policy and for the conduct during the war of the business of the War Cabinet and the Advisory War Council.

2. **Post-war Functions and Organization.**—(i) *The Cabinet and the Council of Defence.* The determination of defence policy is the responsibility of Cabinet. It is assisted in this by the Council of Defence, which is a statutory body created under Section 28 of the Defence Act, its functions being to consider and advise upon any questions of defence policy or organization which are referred to it by the Prime Minister or the Minister for Defence. The Council consists of the Prime Minister and those Ministers most concerned in defence, the three Chiefs of Staff and the Secretary, Department of Defence.

(ii) *Functions of Department of Defence.* Subject to the authority of Cabinet and the Council of Defence, the Minister and Department of Defence are responsible for:—

- (1) The formulation and general application of a unified defence policy relating to the Defence Forces and their requirements, including:—(a) co-operation in British Commonwealth defence and the defence aspect of the Charter of the United Nations; (b) the supply aspect of defence policy, including the review of production programmes and capacity; (c) the scientific aspect of defence policy; and (d) the financial requirements of defence policy, and the allocation of funds made available.
- (2) The defence aspect of Armistice and Peace Terms, Control Commissions, and Forces of Occupation.
- (3) Matters of policy or principle and important questions having a joint service or inter-departmental defence aspect.
- (4) The higher defence machinery, the control of the joint service machinery, and the Secretariat of the Council of Defence.
- (5) The defence aspect of questions relating to the organization and machinery for:—(a) co-operation in British Commonwealth defence; (b) co-operation in regional security, including obligations under the United Nations Charter; (c) higher direction in war; and (d) higher direction of the Services.
- (6) The Commonwealth War Book, which is a summary of national plans for an emergency as developed in Departmental War Books.
- (7) The administration of inter-service organizations, such as the joint intelligence machinery.
- (8) The defence aspect of:—the strength and organization of the Forces, higher appointments in the Services, Honours and Awards, and civil defence policy.

(iii) *Joint Service and Inter-Departmental Machinery.* The joint service and inter-departmental advisory machinery of the Department consists of various committees headed by the Defence Committee, the Chiefs of Staff Committee and the Joint War Production Committee. The Defence Committee is a statutory body consisting of the Secretary, Department of Defence, who is Chairman, and the Chiefs of Staff of the three Services. In general, its function is to advise on defence policy as a whole, and on matters of policy or principle and important questions having a joint service or inter-departmental defence aspect. The main responsibility of the Chiefs of Staff Committee is the preparation of strategic appreciations and military plans. The function of the Joint War Production Committee is, briefly, to examine the relation between strategical plans and their requirements to ensure that the war potential for them exists. The major committees subordinate to the Defence Committee and/or the Chiefs of Staff Committee comprise the principal Administrative Officers Committee (Maintenance and

Materials), the Principal Administrative Officers Committee (Personnel), the Defence Research and Development Policy Committee, the Joint Planning Committee, the Joint Intelligence Committee and the Joint Administrative Planning Committee.

3. Post-war Defence Policy.—(i) *Basis of Australia's Post-war Defence Policy.* The basis of Australia's post-war defence policy is stated in the following terms in the Government's announcement of 4th June, 1947 :—

“The Forces to be placed at the disposal of the United Nations for the maintenance of international peace and security, including regional arrangements in the Pacific ;

The Forces to be maintained under arrangements for co-operation in British Commonwealth Defence ; and

The Forces to be maintained to provide for the inherent right of individual self-defence ”.

(ii) *Post-war Defence Programme.* The approved post-war defence programme extending over a period of five years from 1947-48 to 1951-52 originally provided for the expenditure of £250,000,000 during the period, and this has subsequently been increased to £295,000,000. The post-war defence programme is designed to secure a balanced scheme of defence providing for the Navy, Army and Air Force, Defence Research and Development, and Munitions and Supply, in proper proportions within the limits of the available resources that can be devoted to defence. The roles of the three Services are blended and inter-related and their strength and organization have been determined on the basis of the fulfilment of the objectives of policy stated above.

(iii) *Defence Research and Development.* The whole question of post-war policy is affected by the impact of scientific development on the types of weapons and armament for the various Services, and the results of these developments will be under constant notice. High priority is therefore given in the programme to defence research and development, for which an amount of £33,500,000 is being provided under the five-year programme. The main individual item is the Long Range Weapons Project which is a joint United Kingdom-Australian undertaking. It is the first important step in the widening of Australia's responsibility in defence research and development in accordance with the policy of the strategic development and distribution of the resources of the British Commonwealth. The Department of Defence is responsible for questions of policy in this field, and the Department of Supply and Development is the responsible authority for executive action in respect of approved policy decisions.

(iv) *National Planning for an Emergency.* To achieve a balanced defence policy, it is necessary to ensure proper co-ordination of the Navy, Army and Air Forces, the supply organization and the civil economy which supports the direct military effort. The Government's policy provides for the co-ordination of these as integral parts of the national defence policy. The basis of planning for these matters and also for the civil defence measures necessary to protect the community against attack by modern weapons is the Commonwealth War Book and Departmental War Books. These are now being revised in the light of wartime policy and likely contingencies. There has been established a Standing Committee for the Co-ordination of Departmental Action to Meet an Emergency and sub-committees of the Standing Committee have been set up for detailed planning as required.

(v) *Flexibility of Post-war Policy.* It is important that the future developments in weapons and methods of war should be borne in mind when considering national defence, the shape and size of post-war forces, and the new problems of organization and training which they will create.

Australian policy, like that of the United Kingdom, will be kept flexible. At the same time, while the completion of the objectives laid down will be vigorously pursued according to the planned schedule of the programme, a continuous review will be maintained in regard to progress and the need for any variations that may arise.

4. Co-operation in British Commonwealth Defence.—The defence programme gives practical and substantial effect to the acceptance by Australia of a larger contribution towards the defence of the British Commonwealth in the Pacific, and the relief in corresponding degree of the burden for so long carried by the United Kingdom. The need for improved machinery for co-operation in British Commonwealth defence has been

recognized and advocated by the Australian Government for some time and now that proposals by it to achieve that objective, with particular reference to the Pacific Area, have been agreed to by the Governments of the United Kingdom and New Zealand, planning is actively proceeding between those Governments on mutual defence.

5. **Australian Participation in the Occupation of Japan.**—An account of Australia's part in the organization and activities of the British Commonwealth Occupation Force in Japan up to the end of 1947 will be found in Official Year Book No. 37, page 1144. During 1948 the United Kingdom and New Zealand contingents were withdrawn except for a handful of administrative personnel. On 30th June, 1949 the strength of the Australian contingent was 2,630.

§ 2. Military Defence.

1. **State Systems.**—A detailed historical account of the Australian defence forces prior to Federation will be found in Official Year Book No. 2, pp. 1075–1080. *See also* Official Year Book No. 12, p. 999.

The strength of the military forces of the States on 31st December, 1900 (the eve of Federation) was:—New South Wales, 9,338; Victoria, 6,335; Queensland, 4,028; South Australia, 2,932; Western Australia, 2,696; Tasmania, 2,024; total for Australia, 27,353. This total is exclusive of cadets, reservists and rifle club members.

2. **Commonwealth Systems.**—(i) *General.* Under the terms of the Constitution Act 1900, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in fifteen phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogeneous army in 1902 up to the decision to increase the training strength of the militia to 70,000 in the year before the 1939–45 War (phases 1–7), *see* Official Year Book No. 36 and earlier issues.

The eighth phase was initiated by the Government on 2nd September, 1939, when the Governor-General issued a proclamation of the existence of war or of a danger thereof and for the calling out of the Citizen Forces for war service. The ninth phase was initiated on 13th October, 1939, when the organization of the Australian Military Forces into Commands came into operation. The objects of the Command Organization are as follows:—(a) to bring peace organization into line with war organization; (b) to provide for the personal and whole-time guidance and supervision, by a higher commander, of divisional and other formation commanders, on questions of training and general preparedness for war; and (c) to reduce the number of lower formations under the direct control of Army Head-quarters.

The tenth phase was initiated on 30th November, 1939, when a proclamation was issued under the Defence Act calling upon certain personnel to enlist and serve in the Defence Forces.

The eleventh phase: Owing to a considerable expansion in the administrative functions which the three main commands were called upon to perform, it was decided to relieve the G.Os.C. of these commands and their staffs of much of their administrative responsibilities in order that they might concentrate on operational matters. In January, 1942, therefore, Northern, Eastern and Southern Commands were divided into separate command and base head-quarters—the command head-quarters to handle operational, and base head-quarters administrative, matters.

The twelfth phase: As a result of the expansion in supply and other administrative installations in Australia, it was found necessary to revise the machinery for command administration of lines of communication areas and to decentralize control. A division into lines of communication areas was therefore made, and these areas corresponded with Northern, Eastern, Southern and Western Commands and 7th and 8th Military Districts. Command and general administrative control of the lines of communication areas were placed under the respective base head-quarters and 7th and 8th Military Districts, and came directly under Army Head-quarters.

The thirteenth phase: In August, 1941 War Cabinet approved of Lieutenant-General Sir Iven Mackay as G.O.C.-in-C. Home Forces commanding the forces in Northern, Eastern and Southern Commands. The G.O.C.-in-C. was made superior to the G.Os.C. Commands for the direction of operations, but subordinate to the Military Board, which remained the body advising the Minister for the Army, and through him, War Cabinet.

The fourteenth phase: Shortly after the outbreak of war with Japan, a number of units of the United States Forces were routed to Australia. Subsequently additional forces arrived. By agreement among the Governments of the United States, the United Kingdom, the Netherlands and Australia in April, 1942, General Douglas MacArthur was appointed Commander-in-Chief, South-west Pacific Area. General Sir Thomas Blamey was assigned to the command of the Allied Land Forces in the South-west Pacific Area by General Head-quarters, South-west Pacific Area. With the appointment of General Sir Thomas Blamey as Commander-in-Chief Australian Military Forces, the Military Board ceased to function and Army Head-quarters became Allied Land Forces Head-quarters, Australia. As from 9th April, 1942, the system of commands and bases was abolished and replaced by the field army and lines of communication areas which were established in each of the six States on the mainland plus Northern Territory and New Guinea. Field formations were formed as follows:—

First Australian Army—from Northern and Eastern Commands.

Second Australian Army—from Southern Command.

Third Australian Corps—from Western Command.

Northern Territory Force—from 7th Military District.

New Guinea Force—from 8th Military District.

In March, 1943 First and Second Armies took over from Queensland, New South Wales and Victoria Lines of Communication Areas the command of all coast and static anti-aircraft artillery defences and training establishments. On 16th June, 1944 Western Command was re-established and took over the combined responsibilities of Third Australian Corps and Western Australia Line of Communication Area.

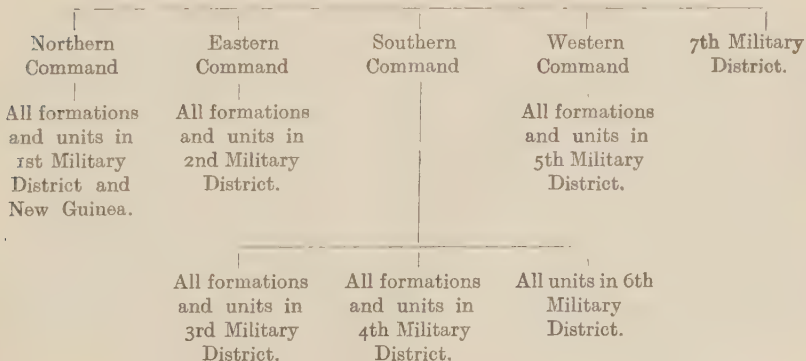
The fifteenth phase: In March, 1946 the Military Board and the organization of commands and military districts were re-introduced.

(ii) *Population of Military Age, Census, 1947.* The following particulars show the numbers of males of military age in the population of Australia as at the Census of 30th June, 1947. The total number of cadet age, 12 and over, and under 18, was 333,373; at citizen soldier age, 18 and over, and under 26, 495,859; and 26 and over, and under 35, 532,210; making a total of 1,028,069, 18 and over, and under 35, which is considered the best period for military service. In addition to the above-mentioned, there were 1,186,141 males 35 and over, and under 60, in Australia at the 1947 Census.

(iii) *Allotment of Units.* Under the Command Organization (*see above*) units are raised on a territorial basis, each State supplying its proportion of the personnel required for the fighting services, the organization at 30th June, 1949 being as follows:—

COMMAND ORGANIZATION.

Army Head-quarters.



Military Districts conform generally to State or Territory areas, as follows :—1st Military District, Queensland; 2nd, New South Wales; 3rd, Victoria; 4th, South Australia; 5th, Western Australia; 6th, Tasmania; 7th, Northern Territory. Third Military District includes a considerable portion of Southern New South Wales, and 4th includes Broken Hill.

(iv) *Strength of Military Forces.* There was little alteration in the numbers serving in the Australian military forces from the institution of the Commonwealth to the year of the introduction of the compulsory training system. From 1913 to 1918, however, the annual increase was considerable. As a result of the International Conference which met at Washington on 11th November, 1921, it was decided to continue the universal training law, but its operation was restricted to the more populous centres and to certain quotas only. From 1st July, 1922 to 30th June, 1925, training in the Senior Cadets was limited to two quotas instead of four, and in the Citizen Forces to two quotas instead of seven. On 1st July, 1925 Senior Cadet training was reduced to one quota only, while Citizen Force training was increased to three quotas. These conditions remained in force until 1st November, 1929, when the constitution of the forces on a voluntary basis was adopted. During the period last mentioned Senior Cadet training commenced on 1st July of the year in which Senior Cadets reached the age of 17 years, and on 1st July of the following year they were allotted to the Citizen Forces, in which training continued until 30th June of the year in which they attained the age of 21 years. Notwithstanding the reduction in training, all males residing within 5 miles of a training centre were required to register during the months of January or February of the year in which they reached the age of 14 years. Junior Cadet training of boys of the ages of 12 and 13 years, which was in abeyance during the years 1922–23 and 1923–24, was also supervised by the Defence Department during the period 1st July, 1925 to 31st October, 1929.

Under the voluntary enlistment system, personnel might enlist for a first period of three years, and on its completion the member concerned might be re-engaged for successive periods of two or three years until he reached the age for retirement.

In 1947, to provide a basis for the establishment of the post-war Army, the Commonwealth Government approved a programme extending over a period of five years to 1952. This programme provides for a Regular Army of a total strength of 20,000 all ranks, and a Citizen Force of a total strength of 50,000 all ranks. The strength of the Australian Military Forces (Australian Regular Army and Citizen Military Forces not including Cadets) at the 30th June, 1949 was 30,801. Enlistment in the Australian Military Forces is restricted to British subjects resident in Australia with a minimum age of 18 years.

The Australian Cadet Corps is a voluntary organization comprised of Senior Cadet units raised at educational establishments in all States of the Commonwealth. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies a foremost position in the scheme of national defence. The minimum age for enrolment in school units is the year in which the applicant reaches the age of 14 years, and cadets, who in the large majority of schools receive a free issue of A.M.F. pattern uniform, may remain in the Cadet Corps until they cease to be pupils of the educational establishments concerned. A few units retain their own pattern school uniform and are not issued with A.M.F. pattern uniforms. Provision is made for the appointment of officers, warrant and non-commissioned officers on an authorized establishment scale from within school units. School cadets' units are not affiliated with Citizen Military Force units. The establishment for the whole Corps is 35,000 all ranks, and by December, 1948 the number of cadet units raised was 224 with a total strength of 20,535.

Approval has recently been given for the raising of Regimental Cadet units in close collaboration with Citizen Military Force units. These units are manned by the enrolment of boys who have either left school or are students at schools where no unit of the Cadet Corps is raised. Regimental Cadets wear the same uniform as their parent Citizen Military Force unit with the addition of the word "Cadets" directly under the unit title.

(v) *The Australian Staff College.* Until 1938 the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938 an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney, was established.

Between 1939 and 1945 the training of staff officers was carried out under varying conditions by different schools in accordance with the changing needs of the war.

Early in 1946 the Staff School (Australia) was established at Seymour in Victoria and re-designated the Australian Staff College in conformity with other Empire training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff in Victoria, where it is at present situated.

The courses are of one year's duration and are held from February to December each year. The normal intake is 30 students and, on successfully completing the course, an officer is awarded the symbol "psc". The course is designed to train Grade II, Staff Officers, and students may be nominated by the Royal Australian Navy, the Royal Australian Air Force and the Commonwealth Public Service. Each course includes among the students Army representatives of the other Dominions.

In order to ensure common standards in tactical doctrine and staff and command training throughout the Empire, liaison is maintained with other Staff Colleges; and to this end there is also a reciprocal exchange of instructors. To this extent it may be said that the Australian Staff College is imperial in character.

(vi) *Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations and provide for admission by "normal", "service" and "special" entries. The length of the normal course is four years; "service" entry cadets attend for three years.

While at the College, cadets receive pay and allowances of 7s. per day in their first year, rising to 11s. per day in their fourth. Uniform maintenance allowance of 1s. per day is additional. The course of instruction is organized into military and civil departments and the instructional staff comprises officers of the army and civilian professors and lecturers. On graduation, cadets are appointed lieutenants in the Australian Regular Army. The College also trains New Zealand cadets for commissions in the New Zealand Permanent Forces under an agreement made with the Government of that Dominion.

(vii) *Rifle Clubs.* The Australian Rifle Club movement, which had its origin in 1888, is provided for in the Defence Act and comprises an Australian Council of State Rifle Associations (which functions in an advisory capacity to the Minister and in the promotion of inter-empire and interstate rifle competitions), State Rifle Associations, District Rifle Club Unions and Rifle Clubs. Prior to 1931 the administration of the organization was the responsibility of the Secretary for Defence. From that year its control passed to the Military Board. This organization continued until the outbreak of the recent war. In 1941 rifle clubs were placed in recess and, with the exception of annual miniature rifle competitions, remained inactive until August, 1946, when approval was given for the re-establishment of the movement on a civilian basis under the control of the Secretary, Department of the Army. When placed in recess, the efficient strength of the rifle club movement was 1,018 clubs and 36,478 members. Approximately 20 per cent. of this number served overseas and a further 60 per cent. performed home service duties during the recent war. Rifle shooting activities were resumed in 1946 and the strength position of the movement as at 30th June, 1949 was 1,037 clubs and 48,155 members.

(viii) *The Australian Battles Nomenclature Committee.* The Minister for the Army gave approval on the 25th July, 1947 for the formation of the Australian Battles Nomenclature Committee and for its terms of reference to be as follows :—

- (a) to tabulate those operations fought in the Pacific Zones in the 1939-45 War which involved the Australian Military Forces ;
- (b) to classify these operations in accordance with a definite system of nomenclature which will denote their relative importance ;
- (c) to define the geographical and chronological limits of each operation ;
- (d) to advise the United Kingdom Battles Nomenclature Committee regarding operations in zones other than the Pacific Zone in which the Australian Military Forces participated.

The inaugural meeting of this Committee was held at Victoria Barracks, Melbourne on 16th December, 1947, under the chairmanship of General Sir Thomas Blamey. At this meeting sub-committees were appointed to study the various campaigns in order to classify the operations into battles, actions and engagements.

3. **1939-45 War.**—(i) *General.* For a detailed account of the part played by the Australian Military Forces in the 1939-45 War, together with a chronological list of important events, see Official Year Book No. 36, pages 1016 to 1022.

(ii) *Gross Enlistments.* For particulars of the gross enlistments in the Australian Military Forces during the 1939-45 War, see Official Year Book No. 37, page 1150.

(iii) *Disbandments.* The Australian Imperial Force was disbanded on the 30th June, 1947, and replaced by the Interim Army. The Australian Women's Army Service, which had been formed on the 29th September, 1941 with the object of enlisting women for the replacement of men in rear areas, was also disbanded on the same date.

(iv) *Casualties.* Particulars of casualties will be found in § 6. following.

(v) *Decorations and Awards.* A list of the numbers of the various decorations and awards conferred appears in § 7. following.

§ 3. Naval Defence.

1. **State Systems.**—Information regarding naval defence systems prior to 1901 will be found in Official Year Book No. 2, p. 1084.

2. **The Present System.**—(i) *General.* (a) *Royal Australian Navy up to end of 1939-45 War.* An outline of the development of Australian Naval policy was given in Official Year Book No. 3, p. 1060 and No. 12, p. 1012. Some account of the building of the Australian Navy, the proposed and modified cost thereof, the compact with the Imperial Government, etc., appears in Official Year Book No. 15, pp. 921 *et seq.* An account of the growth and activities of the Royal Australian Navy during the 1939-45 War is given in Official Year Book No. 36, pp. 1023 *et seq.*

(b) *Post-war Programme.* In June, 1947 the post-war defence policy of the Commonwealth Government was announced by the Minister for Defence. A sum of £250,000,000 was to be expended over a period of five years in the carrying out of an approved programme (see § 1. 3 (ii) above). Of this amount, the Navy was to receive £75,000,000 allotted at the rate of £15,000,000 annually. In June, 1949 the Government allotted a further £45,000,000 to the defence programme. The Navy will receive portion of this sum, part of which will be utilized to finance a resumption of reserve training in 1950.

The following is a summary of the naval programme :—

(1) Ships in Commission—

Fleet: It is proposed that by the end of the programme, the Fleet should consist of :—2 Light Fleet Carriers, 2 Cruisers, 6 Destroyers.

Escort Forces : 3 Frigates.

Surveying Duties : 3 Survey ships and their tenders.

Training Ships : 1 Frigate, 2 Australian Minesweeping Vessels, 3 Air/Sea Rescue Vessels.

Auxiliary Vessels : 1 Ocean-going Tug, 1 Ammunition Carrier, 2 Boom Defence Vessels.

(2) Ships to be retained in Reserve and maintained in good condition against any future emergency—

One Cruiser, 2 Destroyers, 6 Frigates, 1 Sloop, 30 Australian Minesweepers, 39 Miscellaneous Vessels.

(3) Change in Status—On 1st January, 1949 the Royal Australian Navy ceased to be a squadron and assumed the status of a fleet, a fleet being an organization consisting of various types of ships and naval aircraft, capable of undertaking major operations.

(4) Personnel—Recruiting is in progress to raise the strength of the Royal Australian Navy to a total of 14,753, inclusive of air personnel, by 1951-52. This number will comprise 6,756 sea-going forces and 7,997 for shore establishments and pools.

(5) Reserve Training—Training will be resumed as from 1st January, 1950 and will be carried out in each of the capital cities. Training will be voluntary, and members will be asked to undergo 15 days' night and/or Saturday training in their home establishments plus 13 days' continuous training each year in H.M.A. ships or training establishments, including specialist Schools. In addition, payment will be made for further voluntary home training up to a maximum of 12 days. Selected members may undergo special courses up to a limit of six months during the whole of their service in the Reserve, whilst up to 12 months' training or service may be performed in an H.M.A. ship or establishment with similar qualifications. Engagements are for three years. Rates of pay have not been finalized. Provision has been made for the training of 450 officers and 3,550 ratings in the first year.

(6) Naval Aviation—The first stage of the Royal Australian Navy's naval aviation plans has been reached with the commissioning and arrival in Australian waters in May, 1949 of H.M.A.S. *Sydney*, the first of two projected light fleet carriers. An Air Station (H.M.A.S. *Albatross*), where training is proceeding, was opened in August, 1948. Finance provided in the current five-year programme totals £11,976,000 for capital expenditure and £11,432,000 for maintenance.

(7) Ship Construction and Repair—Provision is made for the maintenance in Australia of a nucleus ship construction and repair industry capable of rapid expansion in war. An average sum of £2,500,000 is proposed to be expended annually on the completion of the present destroyer programme for four ships under construction and two to be laid down.

(8) Shore Establishments—There will be shore establishments essential for basing commissioned ships and to provide administrative storing, repair and training facilities. A new base now being established at Manus Island (Admiralties) will replace the present New Guinea Base at Dreger Harbour, New Guinea.

(c) *The Relation of New Weapons.* Careful consideration has been given to the implications of new weapons, and the decisions in regard to the Navy are based on the broad conclusions of great naval powers that these weapons should be introduced by the normal process of evolution, first into existing ships, and later perhaps into an entirely new form of fighting ship. The same authoritative opinion is of the view that there will be no rapid development which will render vessels such as carriers, cruisers and destroyers obsolete within the near future.

(ii) *Naval Board.* The Australian Navy is administered by a Board consisting of the Minister for the Navy with four Naval Members, including a member for Naval Aviation, one Finance Member and the Secretary, Department of the Navy (ex-officio); the seat of administration is at Melbourne.

(iii) *Naval College.* Twenty-eight Cadet Midshipmen entered the Naval College for training in the year commenced January, 1949. In addition, there were seven seventeen-year-old youths enrolled, five for the Supply and Secretariat Branch and two for executive training.

(iv) *Training Establishments.* Flinders Naval Depot, Victoria remains the principal training establishment for ratings in the permanent forces, while several advanced training schools are established in Port Jackson, New South Wales. Air training has begun at Nowra, New South Wales.

(v) *System of Payment.* Since the close of hostilities in August, 1945, the entire pay code of the R.A.N. has been revised and a new code is now operative. A voluntary superannuation scheme became operative during 1948-49, an alternative to the still existent system of accumulating deferred pay.

(vi) *The Australia Naval Station.* Defined limits of the Australia Station will be found in Official Year Book No. 37, page 1152.

(vii) *BCOF.* On 1st October, 1948 the R.A.N. assumed responsibility for British Commonwealth Naval representation in Japan. H.M.A.S. *Commonwealth* is the base establishment at Kure and the R.A.N. maintains one destroyer or one frigate on the Station.

3. *Ships of the Royal Australian Navy.*—The following ships were in commission or in reserve in October, 1949 :—

SHIPS OF THE ROYAL AUSTRALIAN NAVY, OCTOBER, 1949.

Vessel.	Description.	Displacement.
In Commission—		Tons.
<i>Sydney</i>	Aircraft Carrier	14,000
<i>Australia</i>	Cruiser	9,870
<i>Bataan</i>	Destroyer	1,870
<i>Arunta</i>	"	1,870
<i>Warramunga</i>	"	1,870
<i>Quiberon</i>	"	1,760
<i>Quickmatch</i>	"	1,760
<i>Shoalhaven</i>	Frigate	1,544
<i>Barcoo</i> (Surveying Ship)	"	1,544
<i>Condamine</i>	"	1,420
<i>Culgoa</i>	"	1,420
<i>Murchison</i>	"	1,544
<i>Warrego</i> (Surveying Ship)	Sloop	1,060
<i>Latrobe</i>	Australian Mine Sweeper	650
<i>Gladstone</i>	" " "	650
<i>Tarakan</i>	Landing Ship (Tank)	1,625
<i>Labuan</i>	" " "	1,625
Miscellaneous—Sixteen	" " "	"
<i>Lachlan</i> (Surveying Ship), frigate, 1,420 tons, on loan to the New Zealand Navy	" " "	"

SHIPS OF THE ROYAL AUSTRALIAN NAVY, OCTOBER, 1949—*continued*.

Vessel.	Description.	Displacement.
In Reserve—		Tons.
<i>Shropshire</i>	Cruiser	9,870
<i>Hobart</i>	"	7,100
<i>Quadrant</i>	Destroyer	1,760
<i>Quality</i>	"	1,760
<i>Queenborough</i>	"	1,760
<i>Barwon</i>	Frigate	1,420
<i>Burdekin</i>	"	1,420
<i>Diamantina</i>	"	1,420
<i>Gascoyne</i>	"	1,420
<i>Hawkesbury</i>	"	1,420
<i>Macquarie</i>	"	1,420
<i>Swan</i>	Sloop	1,060
<i>Ararat</i>	Australian Mine Sweeper	650
<i>Bunbury</i>		650
<i>Bowen</i>		650
<i>Bundaberg</i>		650
<i>Benalla</i>		650
<i>Coolamundra</i>		650
<i>Cowra</i>		650
<i>Colac</i>		650
<i>Castlemaine</i>		650
<i>Deloraine</i>		650
<i>Dubbo</i>		650
<i>Echuca</i>		650
<i>Fremantle</i>		650
<i>Glenelg</i>		650
<i>Gympie</i>		650
<i>Horsham</i>		650
<i>Inverell</i>		650
<i>June</i>		650
<i>Kiama</i>		650
<i>Katoomba</i>		650
<i>Kapunda</i>		650
<i>Lithgow</i>		650
<i>Mildura</i>		650
<i>Parkes</i>		650
<i>Rockhampton</i>		650
<i>Strahan</i>		650
<i>Shepparton</i>		650
<i>Stawell</i>		650
<i>Townsville</i>		650
<i>Wagga</i>		650
<i>Lae</i>	Landing Ship (Tank)	1,625
<i>LST 3014</i>	"	1,625
<i>Platypus</i>	Depot Ship	3,455
Miscellaneous—Twenty-eight		..

4. **Strength of Royal Australian Navy.**—The serving strength of the Royal Australian Naval forces, both permanent and reserves, at 30th June, 1949 is shown below :—

STRENGTH OF ROYAL AUSTRALIAN NAVAL FORCES (PERMANENT AND RESERVES), 30th JUNE, 1949.

Particulars.	Numbers Borne.		
	In Training.	Officers.	Men.
Royal Australian Navy—Sea-going	667	9,247
Emergency List	34	..
Retired	13	..
Royal Australian Naval Auxiliary Services	9	32
Cadet Midshipmen undergoing training at R.A.N. College	88	..	..
Royal Australian Naval Reserve (Sea-going)	25	..
Royal Australian Fleet Reserve	7
Royal Australian Naval Reserve	13	8
Royal Australian Naval Volunteer Reserve	41	4
Total	88	802	9,298

5. **Casualties, 1939–45 War.**—Particulars of casualties will be found in § 6. following.

6. **Decorations and Awards, 1939–45 War.**—Particulars of decorations and awards appear in § 7. following.

§ 4. Air Defence.

1. **General.**—A statement respecting the preliminary steps taken in connexion with the development of air defence will be found in Official Year Book No. 18, p. 610, and one on the expansion and development, and zones and operations of the Royal Australian Air Force during the 1939–45 War appears in Official Year Book No. 36, p. 1027.

2. **Administration and Organization.**—The Department of Air is responsible for policy for organization and control of the Royal Australian Air Force. The Air Board is responsible, subject to approved policy, for the control and administration of the Royal Australian Air Force, and is constituted as follows :—Chief of the Air Staff, Air Member for Personnel, Air Member for Engineering and Maintenance, Air Member for Supply and Equipment, and Finance Member. The Secretary, Department of Air, is ex-officio a member of the Air Board.

Head-quarters of the Royal Australian Air Force is located at Melbourne. An Overseas Head-quarters is located at London and an Air Attaché at Washington, U.S.A.

With the exception of certain technical units which are allotted to the direct command of a Maintenance Group, the units of the Royal Australian Air Force are organized in five geographical areas throughout Australia.

The geographical areas of command are—

Southern Area—Head-quarters Southern Area controls Air Force units in Victoria, Tasmania and South Australia.

Eastern Area—Head-quarters Eastern Area controls Air Force units in New South Wales and Southern Queensland.

North-Eastern Area—Head-quarters North-Eastern Area controls Air Force units in northern Queensland, New Guinea and adjacent islands.

North-Western Area—Head-quarters North-Western Area controls Air Force units in Northern Territory.

Western Area—Head-quarters Western Area controls Air Force units in Western Australia.

The organization of the Royal Australian Air Force includes the following types of units :—

- (a) R.A.A.F. Stations ;
- (b) Bomber, Fighter, Transport, Tactical Reconnaissance, Survey, Target Towing, Communication and Search and Rescue Squadrons ;
- (c) Aircraft Depots ;
- (d) Stores Depots ;
- (e) Flying Training, Ground Training, Navigation, Radio and Air Armament Schools ;
- (f) Royal Australian Air Force College ;
- (g) Telecommunication Units ;
- (h) Royal Australian Air Force Staff College.

3. **Aircraft.**—Some of the aircraft which are at present being used in the Royal Australian Air Force are : Bomber Squadrons—Lincolns ; Fighter Squadrons—Mustangs and Vampires ; Transport Squadrons—Dakotas ; General Reconnaissance Squadrons—Catalinas and Lincolns ; Army Co-operation—Mustangs and Lincolns ; Training—Tiger Moths, Wirraways, Oxfords, Dakotas, Lincolns, Ansons and Beaufighters.

4. **Establishment.**—The Royal Australian Air Force establishment, as proposed, will comprise—(a) a Home Defence Organization, (b) Task Force elements and (c) a Training Organization consisting in all of approximately 12,000 personnel.

5. **Casualties, 1939-45 War.**—For particulars of casualties incurred by R.A.A.F. personnel during the 1939-45 War see § 6. following.

6. **Decorations and Awards, 1939-45 War.**—The numbers of decorations and awards won by members of the R.A.A.F. during the 1939-45 War are shown in § 7. following.

§ 5. Enlistments in the Australian Services, 1939 45 War.

For particulars of enlistments in the Australian Services during the 1939-45 War, see Official Year Book No. 37, pp. 1155-6.

§ 6. Casualties : Australian Services, 1939-45 War.

Official Year Book No. 37, pp. 1156-1160, contains information in considerable detail on casualties to members of each of the Australian Fighting Services during the 1939-45 War.

This information is dissected into nature of casualty, theatre of war and zone of operations, but is not repeated in this issue because of the limitations of space.

The following table, which is a brief summary of all casualties to members of the Fighting Services during the 1939-45 War, contains revisions in respect of the Navy which have been received since the previous issue. The figures for the other services are unaltered.

ALL CASUALTIES : AUSTRALIAN SERVICES, 1939-45 WAR.(a)

Particulars.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
Killed, died of wounds, injuries, etc. ..	2,031	21,558	10,264	33,853
Prisoners-of-war escaped, recovered or repatriated	263	20,920	1,876	23,059
Wounded, injured, etc. (cases) ..	579	177,049	3,236	180,864
Total	2,873	219,527	15,376	237,776

(a) Excludes deaths and illnesses from natural causes.

The revisions to the Navy figures, which relate to persons killed, died of wounds, injuries, etc., only, comprise the following changes :—Battle Casualties—War against Germany, from 876 to 903 ; War against Japan, from 953 to 951 ; all theatres, from 1,829 to 1,854. Non-battle Casualties—War against Germany, from 40 to 42 ; War against Japan, from 45 to 57 ; all theatres, from 85 to 99. Non-operational Casualties—Australia, from 64 to 58 ; Overseas, from 26 to 20 ; Total, from 90 to 78. Grand total, from 2,004 to 2,031.

§ 7. Decorations and Awards : Australian Services, 1939-45 War.

The numbers of the various decorations and awards conferred on members of each of the fighting forces for gallantry or other meritorious service during the 1939-45 War were shown in detail on page 1161 of Official Year Book No. 37. The totals, which include some minor revisions since last issue, are as follows :—

DECORATIONS AND AWARDS : AUSTRALIAN SERVICES, 1939-45 WAR.

Decoration or Award.	Royal Australian Navy.	Australian Military Forces.	Royal Australian Air Force.	All Services.
British	1,094	10,343	5,222	16,659
Foreign	65	145	174	384
Total	(a)1,159	(b)10,488	(c)5,396	17,043

(a) In addition, 45 decorations or awards were made to British personnel in Australian Services, and one to a civilian with the Australian Services.

(b) In addition, 18 decorations or awards were made to British or Allied personnel on loan to A.M.F., 41 to civilians with A.M.F., and 363 to natives with A.M.F.

(c) Excludes decorations and awards to R.A.F. personnel on loan to R.A.A.F. and to members of R.A.F. who were Australian by birth—particulars are not available.

Foreign awards include those of the United States of America, Russia, Greece, Poland, France, Holland, Belgium and Lebanon.

§ 8. Australian Troops, 1914-18 War.

Particulars of the enlistments, casualties, honours and decorations won, and engagements of the Australian Imperial Force during the 1914-18 War are given in Official Year Book No. 16, pp. 628 *et seq.*

§ 9. Expenditure on Defence.

Details of expenditure on Defence, War (1939-45) Services and Post-war Charges will be found in Chapter XVII.—“Public Finance,” A.—Commonwealth Finance, § 7, pp. 794-6.

§ 10. War Gratuities.

1. **1914-18 War.**—Reference is made in earlier issues of the Official Year Book (*see* No. 15, p. 930) to the bonus payable in accordance with the War Gratuity Acts of 1920 as a war service gratuity to soldiers and sailors who served in the 1914-18 War. Owing to limitations of space this information cannot be repeated, but it may be noted that the gratuity was paid in Treasury Bonds, maturing not later than 31st May, 1924, and bearing interest at 5½ per cent. In necessitous cases payment was made in cash when desired by the person entitled. The first gratuities were made available about the beginning of June, 1920. The total amount paid to 30th June, 1949 was £27,515,036 and bonds amounting to £11,780 had not been redeemed at that date.

2. **1939-45 War.**—Briefly, the War Gratuity Act 1945-1947 provides for payment to members of the Forces of war gratuity (*a*) at the rate of £3 15s. per month of overseas service, subject to a qualifying period of 90 days continuous or 180 days in the aggregate in twelve months, and of certain subsequent periods in Australia, and (*b*) at the rate of 15s. per month of Australian service after 6th December, 1941, subject to a qualifying period of six months' service, other than that for which payment at the overseas rate is made. All members who perform overseas qualifying service will be paid a minimum of twelve months' gratuity at the overseas rate, irrespective of whether the full twelve months period had been completed or not.

In cases of death due to war service either overseas or in Australia, where members of the family were totally dependent on the deceased member, a minimum payment equivalent to three years' gratuity calculated at the overseas gratuity rate may be made. In respect of all other cases of death, overseas and in Australia, due to war service, gratuity at the rate accruing to the member at the date of notification of his death will be continued for a further seven months.

The period of entitlement to gratuity terminated at the date of discharge or on 30th June, 1947, whichever was the earlier. Payment will be made on 3rd March, 1951, or at earlier dates in certain circumstances, and will include compound interest at the rate of 3.25 per cent. per annum on the yearly credit balances. For greater detail on the provisions of the Act *see* Official Year Book No. 36, pp. 1073-4.

A Registrar of War Gratuities controls the register in which are kept the accounts of all persons entitled to war gratuity. The total liability on account of war gratuity is estimated to be about £80,000,000. Provision is made for financing the Act by appropriation from Consolidated Revenue Fund and by borrowing. The War Gratuity Appropriation Act 1948 created a trust account for the payment of gratuities and, from credits of the Import Procurement Suspense, Marine War Risks Insurance, Overseas Shipping and War Damage Fund Trust Accounts, amounts totalling £17,000,000 were made available for that purpose during 1948-49. Total receipts of the War Gratuity Trust Fund during 1948-49 amounted to £33,249,036. Expenditure amounted to £3,197,633 and the balance carried forward amounted to £30,051,403.

§ 11. The Department of Supply and Development.

1. **General.**—On 6th April, 1948 the Department of Munitions (with which the Department of Aircraft Production was amalgamated on the 1st November, 1946) and Department of Supply and Shipping were amalgamated under the name Department of Supply and Development, although certain functions of the Department of Supply and Shipping were taken over by the newly constituted Department of Shipping and Fuel. Records covering munitions production prior to the 1939-45 War appear in earlier issues of this publication (see No. 18, pp. 612-616, and No. 32, p. 241). A statement of the main development in the organization and output of the Department of Munitions during the 1939-45 War, and including the period up to 30th June, 1947, will be found in Official Year Book No. 36 (pp. 1037-1068) and No. 37 (pp. 79, 654-5, 1162-1171). Accounts of aircraft production activities during the 1939-45 War and up to 30th June, 1947 appeared in Official Year Book No. 36 (pp. 1068-1073) and No. 37 (pp. 1167-1170).

2. **Functions of the Department and Acts Administered.**—The functions of the Department of Supply and Development include (a) research, design and development in relation to war *matériel*; (b) the provision or supply of war *matériel*; (c) the manufacture or assembly of aircraft or parts thereof; (d) arrangements for the establishment or extension of industries for purposes of defence; (e) the acquisition, maintenance and disposal of stocks of goods in connexion with defence; and (f) the arrangement or co-ordination of—(i) surveys of Australian industrial capacity and the preparation of plans to ensure the effective operation of industry in time of war, including plans for the decentralization of secondary industries and particularly those relating to defence; and (ii) the investigation and development of Australian sources of supply of goods necessary for the economic security of the Commonwealth in time of war, and, in particular, the investigation and development of additional oil and strategic mineral resources, the production of power alcohol from sugar or other vegetable crops, and the production of oil from coal or shale.

The Acts administered by the Department are as follows:—Aluminium Industry Act 1944; Atomic Energy (Control of Materials) Act 1946; Defence (Transitional Provisions) Act 1946-1948, insofar as it relates to the following National Security Regulations and Orders:—Regulations—Disposal of Commonwealth Property (repealed 5th August, 1949), Minerals (repealed 15th September, 1949), Munitions (repealed 15th September, 1949), Shipbuilding (repealed 15th September, 1949), Supplementary Regulations No. 142, Tinplate Control (repealed 31st December, 1949); Orders—Control of Tinplate Order (repealed 27th October, 1949), Cordage and Fibre Order; Development and Migration Act 1926-1930; Geophysical Survey Act 1928; Northern Australia Survey Act 1934; Petroleum Oil Search Act 1936; Petroleum Oil Search Act 1936 (No. 2); Petroleum Oil Search Act 1940; Petroleum Oil Search Act 1941; Petroleum Prospecting Act 1926-1927; Petroleum Prospecting Act 1928; Supply and Development Act 1939-1948.

3. **Capital Valuations of Government Factories, Laboratories and Establishments.**—The capital valuations of Government factories, laboratories and establishments are shown in the following table.

GOVERNMENT FACTORIES AND ESTABLISHMENTS: CAPITAL VALUATIONS,
30th JUNE, 1949.

(£.)

Establishment.	Land.	Buildings and Works.	Plant and Equipment.	Total.
<i>Ammunition Factories—</i>				
Footscray, Victoria	16,986	835,267	2,370,832	3,223,085
Finsbury, South Australia ..	22,654	243,886	270,280	536,820
<i>Ordnance Factories—</i>				
Maribyrnong, Victoria	5,456	1,209,477	3,767,435	4,982,368
Echuca, Victoria	2,001	143,412	349,495	494,908
Bendigo Victoria	19,187	663,921	1,844,386	2,527,494
<i>Drawing Office—</i>				
Maribyrnong, Victoria	930	52,640	23,170	76,740
<i>Explosives Factories—</i>				
Maribyrnong, Victoria	69,172	2,221,016	1,901,231	4,191,419
Mulwala, New South Wales ..	2,238	1,744,637	1,587,706	3,334,581
<i>Small Arms Factory—</i>				
Lithgow, New South Wales ..	6,874	853,523	3,330,211	4,190,608
<i>Marine Engine Works—</i>				
Port Melbourne, Victoria ..	31,983	108,626	128,212	268,821
Rocklea, Queensland	16,683	61,186	121,378	199,247
<i>Clothing Factory—</i>				
South Melbourne, Victoria ..	1,981	17,061	41,962	61,004
<i>Aircraft Factories—</i>				
Fishermen's Bend, Victoria ..	161,571	876,316	1,488,447	2,526,334
Parafield/Northfield, South Australia	374	106,178	90,707	197,259
Total	358,090	9,137,146	17,315,452	26,810,688
<i>Stores and Transport Depots—</i>				
Maribyrnong, Victoria	39,372	1,019,844	489,259	1,548,475
Sydney, New South Wales ..	13,226	541,207	297,605	852,038
Brisbane, Queensland .. ..	..	52,877	66,718	119,595
Finsbury North, South Australia	33,631	631,264	163,112	828,007
Perth, Western Australia ..	4,238	30,342	53,783	88,363
Hobart, Tasmania .. ..	..	..	14,654	14,654
Oaklands, New South Wales ..	2,704	427,597	83,644	513,945
Total	93,171	2,703,131	1,168,775	3,965,077
Grand Total.. ..	451,261	11,840,277	18,484,227	30,775,765

NOTE.—These figures do not take into account the capital valuations of Research and Development Branch Establishments, including the Long Range Weapons Base Establishment, Salisbury, the Long Range Weapons Establishment Air Component, Mallala, the Long Range Weapons Establishment Range, Woomera, Defence Research Laboratories, Maribyrnong, and the Aeronautical Research Laboratory, Fishermen's Bend.

4. **Value of Output of Departmental Factories.**—The following table showing the value of output for the years 1946–47 to 1948–49 provides a picture of the peace-time production of the Departmental factories. Figures for previous years are given in Year Book No. 37, pp. 1163–64.

DEPARTMENTAL FACTORIES : VALUE OF OUTPUT.
(£.)

Year.	Aircraft Production.	Ammunition.	Clothing.	Explosives.	Ordnance.	Small Arms.	Total.
1946–47 ..	3,601,745	847,181	337,592	499,272	1,213,998	739,179	7,238,967
1947–48 ..	4,118,319	924,036	347,979	486,646	1,283,689	755,651	7,916,320
1948–49 ..	4,026,354	961,034	451,679	601,749	1,636,053	750,523	8,427,392

5. **Aircraft Production.**—(i) *General.* All Commonwealth Government functions in regard to the manufacture of fighter, bomber and trainer aircraft and of aero engines and of other aircraft components required for Royal Australian Air Force purposes are administered by the Division of Aircraft Production of the Department of Supply and Development. Aircraft repair and overhaul activities carried out for the R.A.A.F. in civilian establishments, as distinct from the Service workshops conducted by the R.A.A.F., are also a function of the Division of Aircraft Production, together with the responsibility of supplying aircraft and engine spare parts.

(ii) *Aircraft, Engine and Other Production.* At 1st July, 1947 the major aircraft manufacturing organizations in Australia were engaged in the production of aircraft and aero engines for military purposes in accordance with a programme which continued unchanged throughout the period 1st July, 1947 to 30th June, 1949, inclusive. Lincoln heavy bombers and Tudor military transport were on order at Government Aircraft Factories, Mosquito fighter-bombers and Vampire jet-fighters at De Havilland Aircraft Pty. Ltd., and Mustang fighters, Rolls Royce Merlin engines and Rolls Royce Nene turbo-jet engines at Commonwealth Aircraft Corporation.

Production of Lincoln and Mustang aircraft continued during 1947–48 and 1948–49 at a nominal rate. The last of the Australian Mosquito aircraft was delivered to the R.A.A.F. by De Havilland Aircraft Pty. Ltd. during July, 1948.

Difficulties experienced with the development of Tudors in the United Kingdom made it undesirable to proceed with the manufacture of this type in Australia, and the Tudor project was abandoned in 1948 before the assembly of the first prototype of the aircraft had been undertaken. Deliveries of Rolls Royce Merlin engines to be used for installation in Lincoln heavy bomber aircraft continued from the Engine Factory during the period. The first of the Rolls Royce Nene turbo-jet engines manufactured in Australia were delivered by the Commonwealth Aircraft Corporation during December, 1948 to De Havilland Aircraft Pty. Ltd. for installation in Vampire airframes. The first Australian Vampire—the first Australian jet-propelled aircraft of any type—was flown successfully during June, 1949, but had not been handed over to the R.A.A.F. at 30th June, 1949.

Aircraft annexes established during the war for the manufacture of propellers, retractable undercarriages and heavy forgings in light alloy metals continued to function during the two-year period. The Propeller Annexe made propellers for Lincoln and Mustang aircraft, as well as manufacturing spare parts for propellers in service and carrying out an extensive repair and overhaul programme for both service type and commercial aircraft propellers. Undercarriages for Lincoln and Vampire aircraft were in production at the Undercarriage Annexe.

(iii) *New Aircraft Projects.* During 1948 consideration was given by the R.A.A.F. to the selection of new types of bomber and fighter aircraft to follow the Lincoln and the Mustang projects respectively in the aircraft factories. From the point of view of operational performances, all types of jet-propelled aircraft currently in production for

the R.A.F. and Royal Navy were examined by R.A.A.F. officers and aircraft engineers, the object being to ensure that any selections made could be manufactured successfully in Australia. Recommendations of the Joint Mission were still being made as at 30th June, 1949. Another venture well in hand at the same date was the production of an elementary trainer aircraft as an original design project. This work was allotted to the Commonwealth Aircraft Corporation in April, 1949, a specification covering R.A.A.F. requirements having been prepared.

(iv) *Repair and Overhaul.* The R.A.A.F. has as far as practicable returned aircraft and aero engines requiring major overhaul and the incorporation of modifications to the aircraft and engine manufacturers establishments in which they were produced. This work, together with the production of maintenance spare parts, assists the factory managements to retain a reasonably balanced nucleus of experienced aircraft tradesmen by supplementing the restricted programmes of new aircraft and engine manufacture. In the same way, repair and overhaul of twin-row Wasp engines for the R.A.A.F. continued to be handled concurrently by the Commonwealth Aircraft Corporation. At the Aero Engine Factory, in addition to the production of Rolls Royce Merlin engines for Lincoln aircraft, the Company undertook the repair and overhaul of Merlin engines for the R.A.A.F. and the conversion of surplus Merlin engines from Spitfire aircraft to enable them to be used for installation in Mustang aircraft in preference to procuring new engines for the purpose.

(v) *Naval Aviation.* In anticipation of the arrival in Australia of the aircraft carrier *Sydney* in May, 1949, as an addition to the Royal Australian Naval Establishment, arrangements were made by the Division of Aircraft Production to provide the facilities necessary for the repair and overhaul by civilian contractors of the carrier-based aircraft, engines, propellers and accessories. To this end, it was arranged that the repair and overhaul of airframes of the Fairey "Firefly" and Hawker "Sea Fury" aircraft with which the aircraft carrier is equipped would be undertaken by the Fairey Clyde Aviation Co. Ltd., a combination of the interests of the Fairey Aviation Company of England and the Clyde Engineering Company of Sydney. Engines from the two types of aircraft—Rolls Royce "Griffon" and Bristol "Centaurus"—will be allotted to the Engine Factory for attention, and propellers, which are of the Rotol type for both types of aircraft, will be handled by De Havilland Aircraft Pty. Ltd.

6. **Research and Development.**—(i) *General.* The Research and Development Branch under the Chief Scientist is responsible for defence research and development projects in Australia, and will be divided into two sections as follows, each under a controller:—(a) the Long Range Weapons Project, and (b) Defence Research and Development.

Projects undertaken require approval of the Defence Department from the policy aspect, but executive work follows in the appropriate establishment which operates in close consultation with the armed forces.

The projects and establishments which come under the control of the Branch are dealt with hereunder.

(ii) *Joint United Kingdom-Australian Long Range Weapons Project.* (a) *General.* The Joint United Kingdom-Australian Long Range Weapons Project represents an undertaking shared between the United Kingdom Government and the Commonwealth of Australia, in connexion with the provision of facilities necessary to develop and test long range weapons.

The plan is based on the provision of ranges with the necessary instrumentation, and provides not only for such research and development in the long range weapons field as may be requisite (e.g. instrumentation), but it is also a potential for experiments in other defence research weapons.

The Long Range Weapons Organization under the direction of the Chief Scientist, Department of Supply and Development, consists of three units, all situated in South Australia, and working as a single entity under the Chief Superintendent. Reference to each of these establishments follows.

(b) *The Long Range Weapons Establishment, Salisbury.* The primary purpose of this establishment is to undertake research and development work connected with trials, assessment of results, and with the provision and improvement of equipment used on the range. As facilities at Salisbury grow it is possible that additional lines of research and development will be undertaken.

(c) *Long Range Weapons Establishment Air Component, Mallala.* The Long Range Weapons Establishment Air Component is charged with the two functions of transport (No. 34 Communications Squadron R.A.A.F.) and experimental flight operations (Detachment from Aero Research and Development Unit R.A.A.F.). The transport work so far has entailed over 1,600 hours flying. Several hundred hours had been flown on experimental work.

(d) *Long Range Weapons Establishment Range, Woomera.* The Long Range Weapons Establishment Range has been planned to provide all services and facilities necessary to carry out large scale experiments as required. Facilities being provided at Woomera may be divided into two divisions:—(i) *Administrative Facilities*, and (ii) *Technical Facilities.* *Administrative Facilities*—These include a village to house 2,000 persons with amenities such as a school, hotel, tennis courts, a swimming pool, games oval, golf course, shops, sewerage, etc. Buildings will be mainly in permanent brick construction, but in order to provide immediate living quarters much of the work done so far has been in temporary (i.e. timber) construction. *Water Supply*—July, 1949, saw the completion of the 107 mile pipe-line from Port Augusta, so that water from the Murray River is now available at Woomera. Total distance from the Murray is 283 miles. *Technical Facilities*—The Technical Area of the Range is in permanent construction and most of the buildings will be air-conditioned. The Administration building is almost ready for occupation, and others are approaching completion. The range operating personnel will shortly be accommodated in more adequate workshops and offices. *Air Field*—Good progress is being made in airfield constructions with runways, hangar accommodation and all facilities for both experimental work and aircraft servicing. *Main Missile Range*—The Main Missile Range is located at a distance from the technical establishment and Woomera village. It is here that the various missiles and test vehicles are fired, flown or dropped, the term used depending on whether the missile or test vehicle partakes of the nature of a rocket projectile or of other types of missiles. The Long Range Weapons Establishment Range is in reality a group of ranges each designed to satisfy not only the requirements of the moment, but capable of extension by adding equipment to meet future requirements. *Contribution of the Services*—The range operating personnel is provided largely by the R.A.N., the Army and the R.A.A.F., with the Army assuming the chief administrative responsibility. There are a number of civilian personnel, both scientific and administrative. Although major construction work is being carried out by the Department of Works and Housing, the armed services are also contributing. No. 1 Line Construction Project Squadron, Royal Australian Corps of Signals, No. 1 Field Squadron, Royal Australian Engineers, and No. 2 Air Field Construction Squadron R.A.A.F. are actively engaged.

(iii) *Defence Research Laboratories.* Pending clarification of the part to be played by the Defence Research Laboratories, Maribyrnong, Victoria, in the Australian programme of research and development for defence, the work of the establishment is, in the main, on the lines determined at the end of the 1939-45 War. The greater part of the work has comprised testing (in its broad sense, i.e., including the calibration of instruments) and investigational work of a short-term nature directed to meeting the needs of Service and other Government departments and secondary industry at large. There has been an appreciable volume of longer term research and developmental work. This has been concerned either with specific defence projects, notably in the case of the Explosives and Ammunition Section, or with subjects of more general interest and application, such as the improvement of materials and articles produced in industry, the formulation of standards and rationalization of specifications, and the development of laboratory techniques of measurement and evaluation.

The General Superintendent, in his report for the year ended 30th June, 1949, remarks that it has been clear that, to enable industry to develop along the lines essential to defence, the frontiers of the work of the Defence Research Laboratories will have to be extended both by the entering of new fields and the enlargement of existing ones. Plans for such extensions are, however, being integrated with broader departmental plans for defence research and development.

The work of each section of the Laboratories is outlined below :—*General Chemistry*—Paints and allied materials; textiles and mycology; lubricants, corrosion preventives and packaging; organic chemistry; production of gratiules; miscellaneous service stores. *Chemical Defence*—Gas absorption at activated surfaces; generation of aerosols; atmospheric pollution and air filtration; detection and estimation of gases, vapours and dust in air; protection from, and elimination of, toxic industrial hazards; applied infra-red spectrometry; respirators and other protective equipment; physical and chemical investigations and advice on chemical warfare problems; peace-time uses of chemical warfare materials. *Explosives and Ammunition*—Service explosives and ammunition—problems relating to their design, manufacture, testing, uses and storage. *Metallurgy "A"*—Physical metallurgy; corrosion and metal protection; electroplating; spectrographic analysis; chemical analysis of metals and alloys. *Metallurgy "B"*—Foundry metallurgy; welding metallurgy; industrial radiography; non-destructive testing; photography; pyrometry. *Engineering*—Investigation of fatigue of metals; calibration of load and pressure measuring instruments and testing machines; mechanical testing of metals, rubber, plastics, cordage and other materials; photoelastic methods; design and construction of laboratory equipment. *Metrology*—Maintenance of standards of mass, length and time; design and examination of gauges; testing of measuring instruments, gears and gear-cutting tools, machine tools, balances, weights, volumetric glassware, barometers and time-measuring apparatus; mathematical analysis. *Physics, Optics*—Design of optical systems, including reflecting and microscope objectives; phase-contrast microscopy; interferometry; spectrophotometry; goniometry, infra-red investigations; heat and thermometry; general physics; glass-working, mechanical workshops. *Electricity*—Electronics, including design and construction of special equipment for high voltage low-power supplies, measurement of very short time intervals; high vacua; linear accelerator; dielectric studies; electrical calibrations; magnetism; fine instruments workshop. *Crystal Physics Group*—X-ray diffraction; electron diffraction and electron microscopy and their application to problems in chemistry, physics and metallurgy. *Technical Information Section*—This has a large library of books, periodicals and other publications and unpublished documents on pure and applied physics and chemistry, metallurgy, electrical and mechanical engineering. In collaboration with the laboratory sections it supplies an information service to government departments and industry. A publications unit edits official publications of the laboratories including reports and circulars and, in collaboration with the General Chemistry Section, the monthly periodical *Paint Notes*. *New South Wales Division*—This has a metallurgical laboratory at Lidcombe and a chemical one at Villawood, but these are being consolidated in new head-quarters at Alexandria. Its range of laboratory, advisory and technical information work covers physical metallurgy, industrial radiography, corrosion and metal protection, metallurgical analysis, general chemical analysis and testing, including paint technology. The bulk of the laboratory work has been concerned with solving the day-to-day problems of production. *South Australia Branch*—This branch was opened at Finsbury in 1947 and has since expanded steadily. It has sections for work on physical metallurgy, industrial radiography, chemical metallurgy and pyrometry. Recent developments include a widening variety of chemical work and the calibration and adjustment of electrical instruments, with an increasing amount of advisory and technical information service to industry.

(iv) *Aeronautical Research Laboratories*. The Aeronautical Research Laboratories were established by the Council for Scientific and Industrial Research in 1937, and the first buildings, at Fishermen's Bend, Melbourne, were occupied early in 1940. Fundamental research in aeronautical science, as well as industry, was carried out for the

R.A.A.F. and for civil aviation. In February, 1949 the laboratories became part of the Research and Development Branch of the Department of Supply and Development. Work requested by other organizations is arranged for either at the laboratories or elsewhere. Giving more emphasis to defence research aspects, the work, with appropriate experimental facilities, is organized under the following sections: *Gasdynamics*—The fundamental aspects of aerodynamics are investigated, e.g., high speed flow and turbulence. The section is equipped with a variable pressure high speed subsonic wind tunnel, and two special low turbulence tunnels. *Applied Aerodynamics*—This section deals with the problems of the design of the aeroplane such as control, stability and boundary layer flow. It includes a flight research group working in conjunction with the R.A.A.F. The main item of equipment is an atmospheric pressure wind tunnel. *Structures and Materials*—Characteristics of the load carrying structure are investigated both from the point of view of the efficiency of the structure and of its life under operating conditions. A very large range of mechanical testing equipment is available, including a structural test bay 120 feet by 80 feet for testing wings and large aircraft components, a 600,000 lb. universal testing machine and a tyre and undercarriage testing machine. *Physical Metallurgy*—The materials of aircraft and aero engine construction are studied, particular attention being paid to fatigue, to high temperature materials, to corrosion and to ageing phenomena. *Engines and Fuels*—The power plant, its installation and associated problems are investigated, gas turbines receiving particular attention. A very well equipped combustion laboratory is included in the wide range of engine testing equipment available. *Instrumentation and Electronics*—The main work of this section is the development and construction of special instrumentation required by the other sections for research purposes.

7. **Liquidations.**—Overall realizations on surplus property for the three years ended 30th June, 1949 totalled £19,869,896. For 1946–47 the total was £10,908,825 (liquidations £5,871,924, Division of Aircraft Production £875,799 and machine tools £4,161,102); for 1947–48 £6,750,676 (liquidations £4,914,584, Division of Aircraft Production £661,790, and machine tools £1,180,302); and for 1948–49 £2,204,395 (liquidations £1,933,784, Division of Aircraft Production £152,030 and machine tools £118,581).

8. **Directorate of Supply.**—(a) *General.* The Directorate of Supply was established under the Supply and Development (Administrative) Regulations in 1943 for the purpose of purchasing supplies or arranging services for War Departments. Provision has been made in the amended Supply and Development Act 1939–1948 for the Directorate to continue these functions. Under the latter Regulations the Directorate also assumes the additional responsibility of arranging for the sale or disposal, on behalf of the Department of Supply and Development, the Department of the Navy, the Department of the Army, and the Department of Air, of all surplus or unserviceable property, war matériel, goods and services approved for disposal.

(b) *Disposals.* The Directorate continues, broadly, the policy developed by the Commonwealth Disposals Commission, which was designed mainly to ensure an orderly disposal of surplus war goods at fair market prices.

(c) *Purchases.* The policy of the Directorate is to purchase supplies and foodstuffs for the Naval, Military and Air Forces as far as possible by public tender, as provided by Treasury Regulations.

(d) *Administrative Organization.* The Directorate is situated in Melbourne, and the approving authority for the arranging of contracts is the Contract Board, comprising representatives of the Department of Supply and Development, the Department of the Navy, the Department of the Army and the Department of Air. The Directorate is represented in States other than Victoria by a district organization which also operates in conjunction with a District Contract Board as the approving authority.

9. **Commonwealth Disposals Commission.**—The constitution and function of the Commonwealth Disposals Commission, its policy and procedure and an outline of its activities are recorded in Official Year Book No. 37 (see pp. 1194–6). The Commission comprised two industrialists, two members of the Commonwealth Public Service, and a representative of the Trade Union movement.

The basic principles and methods of disposal adopted by the Commission provided for meeting the needs of Commonwealth and State Departments. Special consideration was given to the requirements of overseas relief organizations, the Red Cross and Australian hospitals and bodies engaged in educational, charitable, health and general

community activities. A wide range of equipment, particularly tools of trade required for rehabilitation purposes, was sold to ex-servicemen who were sponsored by the Repatriation authorities. After the requirements of these priorities were met, the main avenue of disposal was through trade channels and by public tender and auction.

During the five years of its existence, over 124,000 motor vehicles were placed on the roads, of which 70 per cent. found their way to rural areas; thousands of Army tractors and armoured fighting vehicles are to-day in use by municipal authorities, land-owners and industry generally; whole camps and thousands of hutments have been diverted to ease the housing problem; millions of yards of textiles and countless items of clothing have found their way into the economy, including free issues of 670,000 garments and blankets to 260 different charitable institutions; numerous war factories and warehouses have been sold for post-war purposes; thousands of machine tools are being used by industry to make good the lag in production for civilian purposes and by Technical Colleges to train ex-servicemen in peace-time pursuits; aviation authorities are using large numbers of surplus aircraft for passenger and goods traffic; a great variety of ships and small craft have been put back into service to make good the shortage of shipping and to aid the fishing industry.

After five years, during which it disposed of surplus war-time assets to a total value of more than £130,000,000, the Commission ceased to function as from 31st July, 1949. Its remaining duties were taken over by the Disposals Division of the Directorate of Supply, Department of Supply and Development. About 70 per cent. of Australian production in the final stages of the 1939-45 War was being devoted to defence needs, and soon after the war ended much of the stock-pile of materials and equipment owned by the Government, and by many of the factories which had produced it, became surplus to requirements. These assets, in huge quantities, were scattered over the whole of the Commonwealth, in New Guinea and across the northern islands from the Solomons to Borneo. In the following table the total realizations of the Commission over the period of its existence, namely from 4th September, 1944 to 31st July, 1949, are classified according to (a) commodities and (b) holding department or authority.

COMMONWEALTH DISPOSALS COMMISSION : REALIZATIONS FROM SEPTEMBER, 1944 TO JULY, 1949, CLASSIFIED ACCORDING TO COMMODITIES AND HOLDING DEPARTMENT OR AUTHORITY.
(£'000.)

Particulars.	Realiza- tions.	Particulars.	Realiza- tions.
Commodities—		Holding Department or Authority—continued.	
Crude Materials	864	Army—continued	
Basic Materials and Pro- duction	35,658	Sales Nauru—Ocean Is- land	29
End Products	80,068	Sales Borneo—Morotai ..	6,735
Unclassified Sales	18,599	Salvage	1,051
		Air—	
Total Realizations	135,189	Sales Borneo—Morotai ..	795
		Aircraft	1,228
Holding Department or Authority—		General	5,454
Supply and Development—		Navy—General	1,557
Liquidations	20,976	Property, Land and Buildings (a)	11,507
Machine Tools	9,217	Ships and Smaller craft ..	2,793
Aircraft Production ..	3,467	Other Departments ..	8,958
Works and Housing ..	3,834	Auctions (unclassified items)(b)	11,040
Army Mechanical Trans- port	13,978		
Army—		Total Realizations	135,189
General	32,570		

(a) Includes auction sales.

(b) Excludes real property sales by auction.

10. **Tinplate Control.**—Throughout the 1939-45 War assured supplies of tinplate were essential to the packaging of foods for Australian and Allied troops. With this objective the Commonwealth Government established a Commonwealth Tinplate Board, comprising representatives of the industrial and Departmental interests concerned in the availability of adequate supplies, not only for the canning of foodstuffs, but also for more direct war purposes. This Board was replaced on 31st December, 1946 by the Commonwealth Tinplate Advisory Committee and at the same time a Controller of Tinplate was appointed.

Over the eight years ended 30th June, 1949 Australian consumption of tinplate averaged 110,000 tons per annum. Upwards of 85 per cent. is used for the canning of foodstuffs. Most canning factories run at peak capacity in the fruit-picking season, and keep their key personnel in employment during other months of the year in handling such packs as jam from fruit pulp, soup, vegetables, meat and spaghetti.

Australia's tinplate supplies are drawn from the United Kingdom and the United States of America, but during 1949 plans for the establishment of a tinplate mill at Port Kembla were further advanced. Tinplate is rolled to rigid specifications many months in advance of its permanent use in the form of cans.

Control over the use of tinplate in Australia was abolished on 12th October, 1949, but the services of the Committee are being retained by the Commonwealth for advice in the matter of overseas supplies.

11. **Bureau of Mineral Resources, Geology and Geophysics.**—An account of this section was given in the Official Year Book No. 37, pp. 849-50. This matter is further revised and extended in this edition of the Year Book, p. 889.

12. **Stores and Transport Branch.**—This Branch now functions as the central authority, which is responsible for providing all storage and transport facilities necessary to meet the official requirements of Commonwealth Departments and authorities. It has branches in all States and agents in Canberra and Townsville, Queensland.

At the 30th June, 1949 it had under its control land, buildings, plant and machinery, valued at over £4,000,000, and 4,000,000 square feet of storage space, of which 3,600,000 was Government-owned and the balance held under tenancy.

13. **Employment.**—Employment in administrative sections of the Department of Supply and Development and at Government Factories and Establishments at the 30th June, 1939, 1943 (the peak of war-time employment) and 1945 to 1949 was as follows. The table illustrates the rise during the war period, and the subsequent decline, of female employment in the factories.

ADMINISTRATIVE OFFICES AND GOVERNMENT FACTORIES AND ESTABLISHMENTS : EMPLOYMENT.

30th June—	Administrative Offices.			Government Factories and Establishments.			Total.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
1939(a) ..	12	6	18	4,481	574	5,055	4,493	580	5,073
1943(a) ..	3,118	3,115	6,233	32,210	22,548	54,758	35,328	25,663	60,991
1945(a) ..	2,252	2,403	4,655	16,087	7,656	23,743	18,339	10,059	28,398
1946(a) ..	1,698	1,146	2,844	8,549	1,020	9,569	10,247	2,166	12,413
1947(b) ..	1,629	1,021	2,650	11,266	1,348	12,614	12,895	2,369	15,264
1948(c) ..	1,893	1,045	2,938	11,385	1,477	12,862	13,278	2,522	15,800
1949(c) ..	1,315	662	1,977	11,449	1,765	13,214	12,764	2,427	15,191

(a) Munitions only. (b) Includes Aircraft Production in addition to Munitions. (c) Includes Aircraft Production and Supply and Mineral Resources in addition to Munitions.

14. **Finance and Accounts.**—(i) *General.* The expenditure during the years 1944-45 to 1948-49 is shown in the tables which follow. The first table shows the total expenditure, while the second shows details of expenditure under the various trust funds. Apart from Defence Research Laboratories, Research and Development is not included in these figures.

(ii) *Total Expenditure.* The table following shows the total expenditure incurred on account of the Department during the years 1944-45 to 1948-49 inclusive.

SUPPLY AND DEVELOPMENT : TOTAL EXPENDITURE.

(£'000.)

Particulars.	1944-45. (a)(b)	1945-46. (a)(b)	1946-47. (b)	1947-48. (c)	1948-49. (d)
Parliamentary Appropriations ..	25,620	23,656	7,120	7,890	10,031
Trust Fund Accounts ..	83,083	46,059	20,266	19,132	17,159
Department of Supply and Development and for other Administration	2,851	3,924	4,549	910	897

(a) Includes Lend-Lease and Reciprocal Lend-Lease. (b) Department of Munitions.
(c) Former Departments of Munitions and Aircraft Production. (d) Former Departments of
Munitions, Aircraft Production and Supply and Shipping.

(iii) *Trust Fund Expenditure.* The table hereunder shows the comparison between expenditure from the various Trust Accounts during the years 1944-45 to 1948-49.

SUPPLY AND DEVELOPMENT : TRUST FUND EXPENDITURE.

(£'000.)

Fund.	1944-45.	1945-46.	1946-47.	1947-48.	1948-49.
Government Munitions Factories and Establishments ..	20,501	14,245	9,431	8,709	11,311
Manufacture of Munitions ..	53,831	27,064	8,730	5,396	1,581
Machine Tools	2,675	1,019	308	181	16
Materials	6,074	3,708	1,737	411	155
Aluminium Production ..	2	23	60	49	152
Beaufort Homes .. ..	..	(a)	(a)	300	1
Aircraft	(a)	(a)	(a)	4,086	3,862
Minerals Production ..	(b)	(b)	(b)	(b)	81
Total	83,083	46,059	20,266	19,132	17,159

(a) Department of Aircraft Production.

(b) Department of Supply and Shipping.

15. *Australian Shipbuilding Board.*—(i) *General.* The functions of the Board were described in issue No. 37 of this publication (p. 1170). The Shipping Act 1949 provided for replacement by Australian-built vessels of all ships 24 years and over trading on the Australian coast. In order to bring the costs of such replacement vessels within parity of the United Kingdom costs, subsidy of no more than 25 per cent. was granted. The head office of the Board is in Sydney.

(ii) *Construction Programme.* The programme, which underwent many changes to conform with altered requirements, now consists of 13 "A" Class, 9,000 D.W.T. freighters; 14 "B" Class, 6,000 D.W.T. freighters; 10 "D" Class, 3,000 D.W.T. freighters; 2 "D/A" Class, 3,000 D.W.T. freighters; 5 "E" Class, 700 D.W.T. freighters; 2 Union S.S. Coy. of N.Z., 3,000 D.W.T. freighters; 24 Wooden vessels, 300 D.W.T. freighters; and one 1,000 ton Floating Dock.

Important additions are the two vessels for the Union Steamship Coy. Ltd. of New Zealand and two "B" Class, 6,000 D.W.T. vessels for Huddart Parker Ltd. and the Adelaide S.S. Pty. Ltd. respectively.

AUSTRALIAN SHIPBUILDING BOARD : SUMMARY OF CONSTRUCTION AS AT 30th JUNE, 1949.

Class.	Completed.	Under Construction.	Not yet commenced.	Total.
"A"	13	.. ..	.. ..	13
"B"	2	4 { 2 B.H.P. .. 2 Evans Deakin ..	8 { 4 Mort's .. 4 Evans Deakin .. 21	14
"C" .. ..	..	.. ..	.. ..	21
"D"	8	2 (State Dockyard)	.. ..	10
"D/A" .. ..	..	.. ..	2 (Evans Deakin) ..	2
"E"	4	1 (Walkers Ltd.) ..	.. ..	5
Union S.S. Coy of N.Z.	..	.. ..	2 (State Dockyard)	2
300-ton Wooden Vessels	24	.. ..	.. ..	24
Total	51	7	33	91

In addition to the foregoing the 1,000 ton floating dock has been completed for the Department of the Navy.

(iii) *Ship Repair Facilities.* War-time control of ship repair ceased in 1946. Repair facilities, however, are still fully employed with reconversions and general repairs.

16. **Australian Aluminium Production Commission.**—Basic plans for the manufacture of aluminium ingot in Australia were approved by the Commonwealth Government in April, 1941 as a defence measure designed to make this country independent of oversea supplies. In April, 1944 an agreement was made between the Commonwealth and Tasmanian Governments for the establishment of the industry in Tasmania. The Australian Aluminium Production Commission, consisting of two representatives and two deputies acting for the Commonwealth and an equal number of representatives and deputies for Tasmania, was constituted on 1st May, 1945. Finance for the undertaking is provided by a fund of £3,000,000 to which contributions on a £1 for £1 basis are made by the Commonwealth and Tasmanian Governments.

Workable deposits of bauxite (aluminium ore) have been proved in New South Wales, Victoria and Tasmania, the largest deposits being located in the Inverell district of northern New South Wales, where reserves exceeding 8 million tons have been brought under Commission control. A combined alumina and reduction plant is being erected at Bell Bay, northern Tasmania, to which power will be transmitted from a generating station at Trevallyn, near Launceston. Large quantities of plant and equipment have been purchased, and construction work is proceeding with the object of completing the project in 1951. The works will have an output of 13,000 tons of ingot annually.

CHAPTER XXVII.

REPATRIATION.

§ 1. General.

An outline of the activities leading up to the formation of the Commonwealth Repatriation Commission was given in Official Year Book No. 15, p. 931. Some account was given also in the Official Year Book referred to, and in subsequent issues, of the policy and general activities of the Department, while detailed information was incorporated in regard to such matters as sustenance rates and pensions to soldiers and dependants. (*See* Official Year Book No. 17, pp. 598–601.) In 1943 the Australian Soldiers' Repatriation Act was amended by the incorporation of the recommendations of the Parliamentary Committee appointed to inquire into pensions and repatriation benefits. A general increase was made of approximately 20 per cent. in the rates of war pensions and increases were also made in other repatriation benefits.

The main activities of the Repatriation Commission at 30th June, 1949 were confined to the grant, review and assessment of war and service pensions, the provision of medical treatment, payment of re-employment allowances, vocational training of the more seriously disabled members, the renewal and repair of artificial replacements and surgical appliances, the grant and review of sustenance and living allowances and the administration of the Soldiers' Children Education Scheme.

§ 2. War Pensions.

1. **General.**—Provision for the payment of war pensions to soldiers and their dependants was made by the Commonwealth Parliament in the War Pensions Act 1914, which came into operation on 21st December, 1914. This Act was repealed in 1920 by the Australian Soldiers' Repatriation Act. Particulars regarding pensions payable under both these Acts as amended are given on page 210 of Official Year Book No. 34. Owing to limitations of space only some of the main features relating to war pensions under the Australian Soldiers' Repatriation Act 1920–1949 are shown in the following paragraphs:—

(i) *Eligibility for Pension.* There has been a considerable widening of the provision in this respect, to the benefit, mainly, of members of the Citizen Military Forces who have not served outside Australia. These provisions are summarized as follows:—

- (a) A member of the Forces who served (1) outside Australia, (2) in the Territories of Australia, such as Papua and New Guinea, or (3) within Australia in circumstances which can be regarded as actual combat against the enemy, is covered for war pension purposes in respect of incapacity or death which may result from any occurrence happening during the whole period of service.
- (b) In other cases where a member served only in Australia, incapacity or death to be pensionable must have been attributable to service.
- (c) There is a third ground applicable to all in (a) and (b) who have had at least six month's camp service. This provides that, where a condition pre-existed enlistment, a pension may accrue if it is considered that such condition was aggravated by service.

(ii) *Ordinary Rates.* Where the daily rate of service pay was not in excess of 19s., the ordinary rate of pension for total incapacity is £5 10s. per fortnight. Where the daily service pay exceeded 19s., the ordinary rate of pension for total incapacity increases to a maximum rate of £7 6s. per fortnight according to the rate of pay. The wife of a totally incapacitated member of the Forces receives £2 8s., and for each child under 16 years of age 18s. per fortnight.

(iii) *Supplementation of Pension.* Where a member in receipt of a pension at the maximum rate is, because of his war disability, temporarily (for at least three months) precluded from earning, an additional pension may be granted as would bring the total pension to a member up to £10 12s. per fortnight.

(iv) *Women's Nursing and Auxiliary Services.* Members of Women's Services are now entitled to pensions and other benefits as prescribed in the Act. Pension scales are those applicable to male members of the Forces in receipt of similar rates of pay.

(v) *Tuberculosis Cases.* In the case of a member of the Forces who served in a theatre of war, and, at any time after discharge became or becomes incapacitated, or died or dies, from pulmonary tuberculosis, war pension is payable, and medical treatment is provided on application as if the incapacity or death resulted from an occurrence on service. (See also § 3. Service Pensions.)

(vi) *Special Rates.* Those who have been totally blinded as the result of war service and those who are permanently totally incapacitated receive, as from 28th October, 1948, special pensions of £10 12s. per fortnight. In addition, an attendant's allowance of £2 8s. per fortnight is payable to the war-blinded and to certain others who are deemed to be in need of an attendant. The wife and any children receive the same rates as shown in par. (ii).

(vii) *Specific Disabilities.* In cases where the disability is amputation of a limb or limbs or total loss of vision in one eye, amounts ranging from 9s. to £5 2s. per fortnight are payable as from 10th July, 1947, in addition to the statutory rate of pension and, in certain double amputation cases, allowances are payable for an attendant up to £4 16s. per fortnight.

(viii) *Time Limit for Wives.* The time limit within which women must marry in order to be eligible as wives for pension in respect of the 1939-45 War has been extended from seven years to fifteen years from the date of discharge of the member. The children of any such marriage, whenever born, are also eligible. For the 1914-18 War the time limit for wives, i.e., 30th June, 1938, remains, but in certain cases where a member of the Forces has married since that date and has been accepted as totally and permanently incapacitated, an allowance not exceeding £2 8s. per fortnight may be granted to him in respect of his wife, provided, by reason of his war disability, she performs duties essential to his welfare.

(ix) *Rates of Pensions in respect of Death.* (a) *Widows.* Where a member, whose daily rate of service pay was not in excess of 27s. 6d., dies as a result of war service, the rate of pension payable to his widow as from 28th October, 1948 is £6 per fortnight. Where the service pay exceeded 27s. 6d., the rate of pension is higher, ranging from £6 9s. to £7 16s. per fortnight.

(b) *Children of Member.* The first child (under sixteen years) receives a pension of 35s. and each subsequent child 25s. per fortnight. From 2nd October, 1947 a domestic allowance of 15s. per fortnight is paid in the case of a widow and child, or widow and 2 children, to bring the incomes of such families into better proportion with those of widows and 3 or more children. In the case of children both of whose parents are dead, the rates payable are—each child up to 14 years of age, 35s. and each child over 14 years and up to 16 years of age, 40s. per fortnight. An additional amount of 12s. may be paid to double orphans, but certain conditions apply, including a means test.

(x) *Widowed Mother on Death of Member.* A pension varying from £3 10s. to £7 6s. per fortnight, according to the rate of pay of the member, may be granted to a widowed mother, provided widowhood occurred either prior to or within three years after the death of the member. The pension may be supplemented by payment of an additional amount constituting the difference between the statutory pension and £6 per fortnight or part thereof, according to the extent of other income of the pensioner. The value of property possessed does not affect the issue.

2. *Appeal Tribunals.*—The principal Act was amended as from 1st June, 1929 to create tribunals to hear appeals in regard to war pensions. The War Pensions Entitlement Appeal Tribunal is empowered to hear and decide any appeal by or on behalf of ex-members of the Forces or their dependants against a decision of the Repatriation Commission that an incapacity or the death of an ex-member did not arise out of war service. Assessment Appeal Tribunals were created to hear and decide any appeal against a current assessment or a "Nil" assessment of war pension made by the Repatriation Commission in respect of an incapacity of an ex-member of the Forces which had been accepted as arising out of war service. Provision was made by subsequent legislation to enable the Tribunals to hear appeals by certain members for service pensions.

3. Summary of War Pensions, 1948-49.—At 30th June, 1949 the number of war pensions for the 1914-18 War was 150,338 and for the 1939-45 War 289,777 and the amount paid £9,761,608 and £8,992,884 respectively. The outstanding features for 1948-49 for each war were as follows:—

WAR PENSIONS : SUMMARY, AUSTRALIA, 1948-49.

Particulars.	1914-18 War.	1939-45 War.	Both Wars.
New claims granted	1,902	39,016	40,918
Restorations	491	1,058	1,549
Claims rejected (gross)	768	8,192	8,960
Pensions reviewed	21,438	67,809	89,247
Pensions cancelled or discontinued	4,002	9,415	13,417
Deaths of pensioners	3,314	1,196	4,510
Number of pensions in force at 30th June, 1949 ..	150,338	289,777	440,115
Annual pension liability at 30th June, 1949 £	9,654,011	9,522,250	19,176,261
Amount paid in pensions during the year 1948-49 £	9,761,608	8,992,884	18,754,492

4. Classes of War Pensions, 1948-49.—At 30th June, 1949 special rate pensions of £10 12s. per fortnight were being paid to the following classes of members of the Forces:—

WAR PENSIONS : MEMBERS ON SPECIAL RATES, 30th JUNE, 1949.

Class:	1914-18 War.	1939-45 War.	Both Wars.
Blinded members	178	160	338
Tubercular members	1,086	1,606	2,692
Totally and permanently incapacitated members	4,430	1,155	5,585

The following is an analysis of the total number of new claims granted during 1948-49:—

WAR PENSIONS : NEW CLAIMS GRANTED, 1948-49.

Class.	1914-18 War.	1939-45 War.	Both Wars.
Members	683	10,070	10,753
Wives of members (or husbands of members) ..	539	9,814	10,353
Children	355	18,474	18,829
Other dependants	325	658	983
Total	1,902	39,016	40,918

In the following table the number receiving pensions at 30th June, 1949 is shown for each war for each class of pensioner:—

WAR PENSIONS IN FORCE, 30th JUNE, 1949.

Class.	Number of Pensioners.		
	1914-18 War.	1939-45 War.	Both Wars.
Orphan children	1,317	11,606	12,923
War widows	13,829	8,583	22,412
Members	66,264	99,852	166,116
Children	10,617	92,701	103,318
Wives (or husbands)	52,365	70,221	122,586
Parents	5,631	6,580	12,211
Brothers and sisters	124	163	287
Others	191	71	262
Total	150,338	289,777	440,115

5. Number of War Pensioners and Expenditure, 1948-49.—The following table shows the number of pensioners for each war at 30th June, 1949, and the places where payments were made during 1948-49:—

WAR PENSIONS : NUMBER OF PENSIONERS AND EXPENDITURE, 1948-49.

Where Paid.	Number of War Pensioners.				Expenditure. (£.)
	Incapaci- tated Members of the Forces.	Dependants of Deceased Members.	Dependants of Incapaci- tated Members.	Total.	

1914-18 WAR.

New South Wales	..	22,245	6,860	21,127	50,232	3,397,121
Victoria ..	..	22,010	6,308	21,181	49,499	3,015,647
Queensland ..	..	7,490	1,770	7,232	16,492	1,030,034
South Australia ..	..	4,233	1,630	4,024	9,887	687,064
Western Australia	..	5,797	1,622	5,673	13,092	839,117
Tasmania	2,932	784	3,119	6,835	514,665
<hr/>						
Total, Australia	..	64,707	18,974	62,356	146,037	9,483,648
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United Kingdom	..	1,288	1,067	1,388	3,743	248,317
Other Oversea Countries	..	209	96	193	558	29,043
<hr/>						
Total	..	66,264	20,137	63,937	150,338	9,761,608

1939-45 WAR.

New South Wales	..	40,307	10,021	63,681	114,009	3,316,779
Victoria ..	..	22,015	7,178	34,556	63,749	2,233,648
Queensland ..	..	11,905	3,273	19,887	35,065	1,044,917
South Australia ..	..	10,726	2,114	18,557	31,397	1,030,161
Western Australia	..	11,138	2,609	19,946	33,693	918,911
Tasmania ..	..	3,440	842	6,476	10,758	394,069
<hr/>						
Total, Australia	..	99,531	26,037	163,103	288,671	8,938,485
<hr/>						
United Kingdom	..	198	336	271	805	53,103
Other Overseas Countries	..	123	48	130	301	1,296
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Total	..	99,852	26,421	163,504	289,777	8,992,884

6. Summary of War Pensions, 1930-31, and 1938-39 to 1948-49.—The following table shows, for each war, the numbers of pensions granted, claims rejected, pensions in force, and the amount paid in pensions in each of the years ended 30th June, 1941 to 1949, and the total war pensions for each of the years ended 30th June, 1931 and 1939 to 1949 :—

WAR PENSIONS : SUMMARY, AUSTRALIA.

Year ended 30th June—	Pensions Granted.	Claims Rejected.	War Pensions in Force.				Amount paid in Pensions. (£.)
			Incapaci- tated Members of the Forces.	Depend- ants of Deceased Members.	Depend- ants of Incapaci- tated Members.	Total.	
1914-18 WAR.							
1941 ..	1,322	2,419	75,450	25,146	123,393	223,989	7,469,759
1942 ..	785	1,720	74,307	23,847	112,902	211,056	7,294,587
1943 ..	1,419	1,056	73,387	22,988	103,801	200,176	7,707,612
1944 ..	1,201	1,111	72,232	22,114	95,108	189,454	8,618,138
1945 ..	681	954	70,980	21,175	87,048	179,203	8,633,580
1946 ..	650	552	69,640	20,381	79,964	169,985	8,354,800
1947 ..	811	572	68,375	19,759	73,825	161,959	8,309,448
1948 ..	1,378	717	67,116	19,863	68,323	155,302	8,684,261
1949 ..	1,902	768	66,264	20,137	63,937	150,338	9,761,608
1939-45 WAR.							
1941 ..	1,529	2,774	317	791	394	1,502	18,722
1942 ..	8,122	7,728	2,334	3,832	3,117	9,283	207,324
1943 ..	18,352	16,281	7,853	8,345	10,479	26,677	659,384
1944 ..	30,348	34,505	18,126	13,043	23,939	55,008	1,730,471
1945 ..	50,649	41,619	35,766	16,650	49,460	101,876	2,763,796
1946 ..	92,986	66,766	68,097	25,479	95,829	189,405	4,903,409
1947 ..	51,019	31,266	83,995	26,478	122,205	232,678	6,746,192
1948 ..	39,188	13,614	91,657	26,530	142,112	260,299	7,578,512
1949 ..	39,016	8,192	99,852	26,421	163,504	289,777	8,992,884
BOTH WARS.							
1931 ..	11,555	920	75,316	35,617	172,389	283,322	7,996,180
1939 ..	6,794	7,541	77,151	27,571	144,571	249,293	7,819,289
1940 ..	2,469	4,846	76,462	26,388	134,027	236,877	7,682,246
1941 ..	2,851	5,193	75,767	25,937	123,787	225,491	7,488,531
1942 ..	8,907	9,448	76,641	27,679	116,019	220,339	7,501,911
1943 ..	19,771	17,337	81,240	31,333	114,280	226,853	8,366,996
1944 ..	31,555	35,616	90,358	35,157	118,947	244,462	10,348,609
1945 ..	51,330	42,573	106,746	37,825	136,508	281,079	11,397,385
1946 ..	93,636	67,318	137,737	45,860	175,793	359,390	12,585,217
1947 ..	51,830	31,838	152,370	46,237	196,030	394,637	15,055,640
1948 ..	40,566	14,331	158,773	46,393	210,435	415,601	16,262,773
1949 ..	40,918	8,960	166,116	46,558	227,441	440,115	18,754,492

§ 3. Service Pensions.

1. General.—The payment of service pensions was provided for in the Australian Soldiers' Repatriation Act 1935, and the scheme has operated since 1st January, 1936.

Originally fixed on a lower scale, the rate of service pension for a member of the Forces now conforms to the rate of the age or invalid pension which from 28th October, 1948 was £4 5s. per fortnight. The maximum rate for the wife of a member is £2 8s. per fortnight; the rate for the first child under 16 years of age was increased to 18s. per fortnight from 7th July, 1949 and 5s. per fortnight is payable for each of the younger children up to three in number. The actual rate payable in any case is determined after taking into consideration all other income received and property (apart from the home and certain other exempted items) owned by the pensioner, and no service pension can be paid where such other income and/or property exceeds certain specified limits. From October, 1948 the "allowed income" is £188 10s. per annum for a single man and £377 per annum in the case of a member and eligible wife. If a member has property exceeding in value £750 (£1,500 for a member and eligible wife) that alone precludes payment of a pension. Pension is assessed according to the amount of income; if the income from all sources is less than the amount shown above, service pension is assessed at such rate

as will, with that other income, bring the total income of the pensioner (including service pension) up to the "allowed income", provided that the pension cannot exceed the maximum rate specified for the particular class of case. If assessable property is held, then a deduction is made from the pension assessed according to income only, the deductions being made at so much for each complete £10 of property in excess of £100 (or £200 in the case of member and eligible wife). The deductions are as follows:—for each £10 from £100 to £450, 9d. per fortnight; for each £10 of the portion from £450 to £750, 1s. 6d. per fortnight.

Female members of the forces were made eligible in 1936 for consideration of service pensions if they embarked for service abroad; previously they must have served in a theatre of war. In the same year an institutional rate of service pension not exceeding 12s. per fortnight was made available. This pension rate from 28th October, 1948 was 30s. per fortnight, and benefits, particularly, inmates of mental asylums, who were previously excluded from the scheme.

Eligibility for service pensions may be established on the following grounds:—

- (a) Sixty years of age or more, provided the member served in a theatre of war, but eligibility on this ground applies only to the member and not to his wife or children. In the case of a female member of the forces, the qualifying age is 55 years, and service abroad, not necessarily in a theatre of war, is sufficient.
- (b) Permanently unemployable, provided the member served in a theatre of war (or, in the case of a female member, served abroad). Under this class pensions may be paid to the member, his wife and children—up to four in number.
- (c) Pulmonary tuberculosis, whether the member served in a theatre of war or not. Under this class, also, pensions are payable to the wife and children—up to four in number.

Only those members who qualify under Class (c) are entitled to receive both service and invalid pensions at the same time.

The eligibility of wives and children for service pension is as follows:—

1914-18 War: wife married, or child born, before 2nd October, 1931.

1939-45 War: wife married within 15 years after discharge of member; any child born of such a marriage.

During the year 1941-42 the scheme was extended to veterans of the South African War 1899-1902, and by amending legislation in 1943 was further extended to members of the Forces of the 1939-45 War.

2. Operations, 1948-49.—The following are the important details of the service pension scheme during 1948-49:—

Claims granted during year—

Members of the Forces	..	..	..	..	1,770
Wives	..	..	..	..	475
Children	..	..	..	..	48
Total	..	..	..	..	2,293

Claims rejected during year—

Members of the Forces	..	..	..	..	495
Wives	..	..	..	..	219
Children	..	..	..	..	126
Total	..	..	..	..	840

Service pensions cancelled or discontinued during year	..	1,597
Deaths of pensioners during year	..	805
Pensions in force at 30th June, 1949	..	16,018
Annual pension liability on 30th June, 1949	..	£1,414,101
Amount paid in pensions during the year 1948-49	..	£1,328,955

3. Number of Service Pensioners and Expenditure, 1939-40 to 1948-49.—The following table shows the number of service pensions in force and the expenditure for the ten years 1940 to 1949 :—

SERVICE PENSIONS : SUMMARY, AUSTRALIA.

Number of Service Pensions in Force—								
Year ended 30th June—	Age-Members of Forces.	Permanently Unemployable.		Suffering from Pulmonary Tuberculosis.		Total.	Amount Paid in Pensions. (a)	
		Members of Forces.	Dependants.	Members of Forces.	Dependants.			
							£	
1940 ..	3,858	3,706	4,814	623	999	14,000	472,263	
1941 ..	4,008	3,705	4,734	655	979	14,081	511,103	
1942 ..	4,294	3,772	4,591	650	939	14,246	579,656	
1943 ..	4,270	3,695	4,221	452	646	13,284	660,109	
1944 ..	4,235	3,628	4,025	290	406	12,584	652,534	
1945 ..	4,437	3,702	3,807	258	362	12,566	648,996	
1946 ..	4,971	3,896	3,633	244	345	13,089	804,880	
1947 ..	5,894	4,312	3,657	254	358	14,475	904,120	
1948 ..	6,610	4,660	3,791	271	358	15,690	1,238,112	
1949 ..	7,070	4,613	3,699	271	365	16,018	1,328,955	

(a) Includes amounts in respect of 1939-45 War as follows :—1942-43, £2,314; 1943-44, £6,403; 1944-45, £7,528; 1945-46, £11,372; 1946-47, £15,786; 1947-48, £25,315; and 1948-49, £30,830.

§ 4. Medical Treatment of Returned Soldiers Suffering from War Service Disabilities.

At 30th June, 1949 there were 5,383 in-patients, including a number whose care was undertaken by the Repatriation Commission on behalf of other countries or Commonwealth Departments. There were 248,065 out-patient attendances for treatment during the year, excluding treatments by the 2,387 local medical officers resident in metropolitan and country areas and New Guinea. The expenditure to 30th June, 1949 was £26,043,941.

§ 5. General Benefits and Miscellaneous.

1. Other Departmental Activities.—(i) *General.* Since the outbreak of the 1939-45 War, the ordinary activities of the Department in the way of general benefits for the welfare of members and dependants have continued without interruption. They were mainly education and training of children under the Soldiers' Children Education Scheme, medical benefits for widows and children of deceased members and for widowed mothers of deceased unmarried members, funeral expenses for certain classes of members and dependants, and allowances to certain classes of dependants in lieu of pension.

By amending legislation passed during the 1939-45 War, these benefits were extended for members engaged in that war, and new benefits designed for the re-establishment of members after discharge from the Forces were made available. The re-establishment benefits administered by the Repatriation Commission are :—payments of re-employment allowance while awaiting employment; provision of tools of trade and equipment where such are necessary to the member's employment; transportation expenses to meet the

cost of fares and removal of household belongings, where a member, or member and family, take up employment, a business, or settle on the land; supplementation of wages of apprentices whose apprenticeships were interrupted by war service; re-establishment loans to enable members and widows to establish themselves in businesses, practices or other occupations, including (until the Commonwealth Director of War Service Land Settlement began operations early in 1946) agricultural occupations; gifts up to £75 for furniture to members who are blinded or totally and permanently incapacitated, also to widows with children under 16 years of age; and free passages to Australia for wives, widows and children of members who married abroad (and passages outward from Australia in certain cases of members and dependants).

In the Commonwealth Reconstruction Training Scheme, the Commission's part is the re-establishment of the more seriously disabled where ordinary training is not sufficient, and special means have to be found to overcome each problem. Prior to the inauguration (in 1945) of the full scheme, however, the Commission conducted a tentative scheme to train members who were unable, through war disablement, to return to their pre-war occupations. Up to the time the larger scheme took over those still in training, the Commission had dealt with some 430 cases.

(ii) *Review of General Benefits.* The following paragraph gives particulars (number of cases and expenditure) of the more important general benefits over the period from 8th April, 1918 to 30th June, 1949.

(a) *Employment—*

1914-18 War: Number of applications, 251,200; Expenditure—sustenance while awaiting employment, £1,768,000; tools of trade and fares, etc. (gift), £554,000; tools of trade (loan), £21,800.

1939-45 War: The placing of members in employment was carried out by the Commission for only a short period prior to the inauguration of the Department of Labour and National Service, but the Commission has the responsibility of payment of re-employment allowance, provision of tools of trade and payment of fares and removal expenses. Number of cases and expenditure to 30th June, 1949 are as follows:—Re-employment allowances—66,398, £1,025,249; tools of trade (gift)—252,436, £1,844,308; (loan)—17,048, £251,130; fares and removal expenses, —12,686, £182,714.

(b) *Vocational Training—*

1914-18 War: Number of members completed training in full-time courses, 27,696; expenditure, £4,849,600.

1939-45 War: Members completing apprenticeships—12,611, £3,486,613.

(c) *Business Loans—*

1914-18 War: 6,130, £421,800.

1939-45 War: 22,496, £5,331,431. Allowances pending productivity of business—1,111, £67,468. Fares and removal expenses to member proceeding to a business, £495.

(d) *Furniture Grants—*

1914-18 War: Expenditure—gift (to members blinded or totally and permanently incapacitated and to widows), £75,190; loan (to other classes of members), £1,031,570; total number of cases, 35,400.

1939-45 War: Gift (no loan cases)—widows, 5,013, £345,168; members, 232, £10,771.

(e) *Free Passages—*

1914-18 War: £509,120.

1939-45 War: To Australia—4,634, £304,986; from Australia—65, £9,798.

(f) *Soldiers' Children Education Scheme—**Main Scheme : Full-time training as from 13 years of age.*

Particulars.	1914-18 War.	1939-45 War.
Applications	30,427	5,822
Approved	28,745	5,678
Completed training	22,569	1,810
Withdrawn during training	3,954	237
Awaiting next stage of training	66	113
In training	2,156	3,518
Expenditure	£ 2,882,285	292,759

Minor benefits prior to entrance to main scheme : 1914-18 War, £38,321 ; 1939-45 War, £12,338.

(iii) *Total Expenditure on General Benefits.* The total expenditure on general benefits, apart from war and service pensions, from 8th April, 1918 to 30th June, 1949, was as follows :—1914-18 War, £29,827,323 (including loan, £1,676,014) ; 1939-45 War, £23,769,792 (including loan, £5,587,194). Of the grand total of £53,597,115, the largest amounts were absorbed by medical treatment with £26,000,000, vocational training with £8,500,000, and expenses of providing employment, £5,750,000.

2. *Expenditure of Repatriation Commission, 1948-49.*—The expenditure of the Commission for the year ended 30th June, 1949 was £29,271,842, distributed as follows :—

Repatriation benefits—	£
Loans to members	1,111,685
Grants to members and general expenditure (including maintenance of training schools, medical institutions, etc.) ..	6,023,836
Assistance to members in necessitous circumstances	5,500
Allowances to dependants of members not provided for under the Act	407
Total	7,141,428
Soldiers' Children Education Scheme	160,400
War and Service Pensions	20,268,165
Administrative costs—	£
Salaries	1,454,235
Contingencies	247,614
	1,701,849
Grand total	29,271,842

3. *Settlement on the Land of Returned Service Personnel.*—Reference to the settlement on the land of returned service personnel of both the 1914-18 and 1939-45 Wars will be found in Chapter IV, "Land Tenure and Settlement."

CHAPTER XXVIII.

MISCELLANEOUS.

§ 1. Patents, Trade Marks and Designs.

1. *Patents.*—(i) *General.* The granting of patents is regulated by the Commonwealth Patents Act 1903–1946, which, in regard to principle and practice, has the same general foundation as the Imperial Statutes, modified to suit Australian conditions. The Act is administered by a Commissioner of Patents. Fees totalling £10 are sufficient to obtain letters patent for the Commonwealth of Australia and the Territories of Papua, New Guinea and Norfolk Island. Renewal fees are payable as follows :—£1 before the expiration of the fifth year and an amount progressively increasing by ten shillings before the expiration of each subsequent year up to the fifteenth, when the fee becomes £6. If a renewal fee is not paid when it becomes due, an extension of time up to twelve months may be granted on grounds specified in the Act, and subject to the payment of prescribed fees. An amendment to the Act in September, 1946 permits the public to inspect an application, complete specification and provisional specification (if any) after the complete specification has been lodged. Previously specifications were made public only after an application had been accepted, in many cases as much as a year after the date of lodgment.

(ii) *Summary.* The number of separate inventions in respect of which applications were filed during the years 1939 and 1945 to 1949 is given in the following table, which also shows the number of letters patent sealed in each year :—

PATENTS : AUSTRALIA.

Particulars.	1939.	1945.	1946.	1947.	1948.	1949.
No. of applications ..	5,740	7,349	9,072	8,358	7,709	6,724
No. of applications accompanied by provisional specifications ..	3,161	3,600	4,321	3,727	3,302	3,174
Letters patent sealed during each year ..	3,141	1,248	1,901	2,773	3,381	3,550

(iii) *Revenue.* The revenue of the Commonwealth Patent Office during the years 1939 and 1945 to 1949 is shown hereunder :—

PATENTS : REVENUE, AUSTRALIA.

(£.)

Particulars.	1939.	1945.	1946.	1947.	1948.	1949.
Fees collected under Patents Act	45,581	65,479	83,871	90,278	92,500	85,972
Receipts from publications ..	1,828	1,668	2,293	2,100	2,000	1,826
Total	47,409	67,147	86,164	92,378	94,500	87,798

2. **Trade Marks and Designs.**—(i) *Trade Marks.* Under the Trade Marks Act 1905 the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1948. Special provisions for the registration of a “Commonwealth Trade Mark” are contained in the Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable. The Act of 1948 provides for the registration of registered users of trade marks, and also for assignment of trade marks with or without the goodwill of the business concerned.

(ii) *Designs.* The Designs Act 1906, as amended by the Patents, Designs and Trade Marks Act 1910 and the Designs Acts 1912, 1932, 1933 and 1934, is now cited as the Designs Act 1906–1934. Under this Act a Commonwealth Designs Office has been established and the Commissioner of Patents appointed “Registrar of Designs”.

(iii) *Summary.* The following table shows the applications for trade marks and designs received and registered during the years 1939 and 1945 to 1949 :—

TRADE MARKS AND DESIGNS : AUSTRALIA.

Applications.			1939.	1945.	1946.	1947.	1948.	1949.
RECEIVED.								
Trade Marks	..	..	1,992	2,792	4,142	4,041	3,724	3,732
Designs	..	..	865	981	1,544	1,256	990	948
REGISTERED.								
Trade Marks	..	..	1,580	1,003	1,649	2,447	2,386	1,165
Designs	..	..	736	668	771	879	1,005	962

(iv) *Revenue.* The revenue of the Trade Marks and Designs Office during the years 1939 and 1946 to 1949 is shown hereunder :—

TRADE MARKS AND DESIGNS : REVENUE, AUSTRALIA.

(£.)

Particulars.	1939.			1946.			1947.			1948.			1949.		
	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.
Fees collected under Commonwealth Acts	15,951	1082	19	19,245	2220	15	26,913	1552	10	28,708	1228	20	20,673	1386	18

No fees in respect of trade marks have been collected under State Acts since 1922.

§ 2. Copyright.

1. **Legislation.**—Copyright is regulated by the Commonwealth Copyright Act 1912–1935 wherein, subject to modifications relating to procedure and remedies, the British Copyright Act of 1911 has been adopted and scheduled to the Australian law.

Reciprocal protection of unpublished works was extended in 1918 to citizens of Australia and of the United States of America under which copyright may be secured in the latter country by registration at the Library of Congress, Washington. The Commonwealth Government promulgated a further Order in Council which came into operation on 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the observance of the conditions contained therein.

2. **Applications and Registrations.**—The following table shows under the various headings the number of applications for copyright received and registered, and the revenue obtained for the years 1939 and 1945 to 1949:—

COPYRIGHT : AUSTRALIA.

Particulars.	1939.	1945.	1946.	1947.	1948.	1949.
Applications received—						
Literary	1,438	1,469	1,613	1,571	1,585	1,380
Artistic	53	86	66	63	30	36
International	3	..	..	..	..	..
Applications registered—						
Literary	1,359	1,448	1,291	1,674	1,272	1,229
Artistic	38	53	69	66	20	28
International	1	..	..	..	..	..
Revenue £	411	377	438	432	404	339

§ 3. Local Option and Reduction of Licences.

For information on local option concerning the sale of fermented and spirituous liquors and the reduction of licences *see* previous issues of the Official Year Book. Issue No. 22 (pp. 1005–8) contains details, by States, of polls taken and of the operations of the Licences Reduction Boards.

§ 4. Lord Howe Island.

Lord Howe Island is situated in latitude 31° 30' south, longitude 159° 5' east, about 436 miles north-east of Sydney, and has an area of 3,220 acres. The climate is mild and the rainfall abundant, but on account of the rocky formations of its surface only about 300 acres are suitable for cultivation, most of which are devoted to the production of Kentia Palm Seed. The land belongs to the Crown and is occupied rent-free on sufferance.

Discovered in 1788, the Island was first settled by a small party of Maoris in 1853; afterwards a colony was settled from Sydney. Constitutionally the Island is a dependency of New South Wales and is included in King, one of the electorates of Sydney. A Board of Control at Sydney manages the affairs of the Island and supervises the palm seed industry. The population was 179 at the Census of 30th June, 1947.

§ 5. Commonwealth Scientific and Industrial Research Organization.

1. **General.**—By the Science and Industry Research Act 1949, the previously existing Commonwealth Council for Scientific and Industrial Research was reorganized under the title of the Commonwealth Scientific and Industrial Research Organization. An account of the organization and work of the former Council, and of the earlier Commonwealth Institute of Science and Industry from which the Council was formed, was given in earlier issues of the Official Year Book. (*See* No. 14, p. 1061 and No. 37, p. 1183.)

2. **Science and Industry Research Act 1949.**—This Act provides for—

- (a) An Executive of the Organization consisting of five members to be appointed by the Governor-General, at least three of whom shall be persons possessing scientific qualifications ;
- (b) an Advisory Council of the Organization consisting of the members of the Executive, the Chairman of each State Committee constituted under the Act, and such other members as the Advisory Council, with the consent of the Minister, co-opts by reason of their scientific knowledge.

The powers and functions of the Organization are as follows :—(a) To initiate and carry out scientific researches in connexion with primary or secondary industries in Australia ; (b) to train research workers and to establish industrial research studentships and fellowships ; (c) to make grants in aid of pure scientific research ; (d) to establish and make grants to industrial research associations in any industry ; (e) to test and standardize scientific apparatus and instruments ; (f) to collect and disseminate scientific and technical information ; (g) to publish scientific and technical reports and periodicals ; and (h) to act as a means of liaison between Australia and other countries in matters of scientific research.

3. **Science and Industry Endowment Act 1926–1949.**—Under this Act, the Government established a fund of £100,000, the income from which is used to provide assistance (a) to persons engaged in scientific research ; and (b) in the training of students in scientific research. Provision is made for gifts or bequests to be made to the fund, which is controlled by a trust consisting of the Executive of the Organization. In accordance with the Act, arrangements have been made to send a number of qualified graduates abroad for training in special fields of work.

4. **Work of the Organization.**—The activities of the Commonwealth Scientific and Industrial Research Organization have necessitated a widespread and adaptable arrangement of its research laboratories. Undesirable centralization has been avoided mainly in two ways. In the first place, the policy has been followed of establishing laboratories in different places in the Commonwealth wherever the necessary facilities, contacts and other suitable conditions could best be found. Secondly, the Act provides for the establishment of a State Committee in each of the six States. These Committees are widely representative of scientific and industrial interests, and advise the Executive or the Advisory Council on general matters and on particular questions of investigation and research.

For about twelve years after its establishment, the work of the previous Council was devoted mainly to the solution of problems affecting the agricultural and pastoral industries. Unlike manufacturing concerns, which can often employ their own scientific staffs, the farmers and the pastoralists are dependent on outside help for the solution of their problems which require research. It was a recognition of the greater need of the primary producer which directed the Council's early policy. However, in 1937, the Commonwealth Government decided to extend the activities of the C.S.I.R. so as to provide assistance to secondary industries, and several laboratories have been established for work in that field ; it was thus in the fortunate position of being able to render to these industries assistance of vital importance almost immediately after the outbreak of war. In fact, the remarkable technological advances and developments in secondary industrial production during the war would to a large extent have been impossible had it not been for the assistance rendered by scientific research, and this may well serve as a forceful illustration of what may be accomplished in times of peace.

For the purpose of carrying out its research work there are established within the Organization a number of Divisions and Sections. The Divisions, of which there are now fourteen, comprise the major establishments for which special laboratory buildings have been erected and equipped ; the Sections generally include establishments which have not reached a stage of development, so far as the scope and magnitude of their operations

are concerned, to justify their designation as Divisions. As the Organization's investigations extend on a Commonwealth-wide basis and as many of the investigations which are being conducted—particularly those concerned with problems affecting the agricultural and pastoral industries—necessitate experimental work in the field, a number of field stations have been established in various parts of Australia.

The Divisions which have been established are as follows :—

- (1) Plant Industry, with main laboratories at Canberra and field stations.
- (2) Entomology, with main laboratories at Canberra and field stations.
- (3) Animal Health and Production, with main laboratories in Melbourne and Sydney and field stations.
- (4) Biochemistry and General Nutrition, with main laboratories at Adelaide and field stations.
- (5) Soils, with main laboratories at Adelaide and extensive operations in the field.
- (6) Forest Products, with main laboratories in Melbourne and field experiments.
- (7) Food Preservation and Transport, with main laboratories at Homebush, New South Wales, and a subsidiary laboratory in Brisbane.
- (8) Fisheries, with main laboratories at Cronulla, New South Wales, and experimental work in coastal waters of Australia.
- (9), (10), (11) Metrology, Physics and Electrotechnology comprising the National Standards Laboratory at Sydney.
- (12) Radiophysics, with main laboratory at Sydney.
- (13) Industrial Chemistry, with laboratories in Melbourne.
- (14) Tribophysics, with laboratories in Melbourne.

The following are the Sections :—

- (1) Commonwealth Research Station, Murray Irrigation Area, Merbein, Victoria.
- (2) Irrigation Research Station, Griffith, New South Wales.
- (3) Radio Research Board, Sydney.
- (4) Dairy Products, Melbourne.
- (5) Mathematical Statistics, Adelaide.
- (6) Mineragraphic Investigations, Melbourne.
- (7) Ore-dressing Investigations, Melbourne and Kalgoorlie.
- (8) Building Research, Melbourne.
- (9) Flax Research, Melbourne.
- (10) Nuclear Physics, Melbourne.
- (11) Physical Metallurgy, Melbourne.
- (12) Meteorological Physics, Melbourne.
- (13) Wool Textile Research Laboratories, Geelong, Melbourne and Sydney.
- (14) Oenological Research, Adelaide.
- (15) Coal Research, Sydney.
- (16) Mathematical Instruments, Sydney.

In addition to its investigational work, the Organization maintains an Information Service which deals with inquiries covering a wide range of scientific and technical subjects. Since the outbreak of war in 1939 Scientific Research Liaison Offices have been established in London and Washington.

The Organization's Head Office, with administrative and executive staff and central library, is in Melbourne. The funds for the Organization are provided from two main sources, viz., from Commonwealth revenue by Parliamentary appropriation and from industry directly or indirectly by way of contributions and special grants. The fact that contributions and grants account for over one-eighth of the total annual expenditure indicates that C.S.I.R.O. has succeeded in a very large measure in gaining the confidence of the public.

The activities of C.S.I.R.O. are now so comprehensive in their scope and so widely distributed that it is not an easy matter to present in a concise form an adequate picture of them. For details of the investigations in progress reference should be made to the Annual Report of the Organization.

§ 6. Australian Institute of Anatomy.

1. *Foundation of Institute.*—The Australian Institute of Anatomy, situated in Canberra, occupies a monumental building erected by the Commonwealth Government under the Zoological Museum Agreement Act of 1924. Prior to the passing of this Act, the Commonwealth Government had expressed regret that the Australian Nation possessed neither a collection of specimens of the unique and fast disappearing fauna of Australia, nor a Museum in which such specimens could be preserved for future generations. Comparative anatomy is the basis of medical science, and while the importance of a study of Australian animals in the solution of various medical problems had for years been recognized by other countries and steps taken by them to procure specimens for their museums, national effort in this direction was neglected in Australia. The late Sir Colin MacKenzie, the first Director of the Institute of Anatomy, however, very kindly presented to the Commonwealth Government his entire private collection, and this magnificent gift was acquired and provision was made for its proper housing under special legislation by the Commonwealth Government. In 1931 the Institute became an integral part of the Commonwealth Department of Health.

2. *Additions to Original Collection.*—In addition to the original collection, which has been greatly augmented, the following gifts have been made to the Australian Nation, and are on view in the Institute:—

- (1) *Horne-Bowie Collection.*—Dealing with the life of Central Australian aborigines and throwing valuable light on the psychology of this Stone Age people.
- (2) *Burrell Collection.*—This deals with the life history of the platypus, and is unique in the world. The platypus is the most primitive mammal known to science, and is the link between the bird, the reptile and the mammal.
- (3) *Milne Collection.*—This is an anthropological and ethnological collection dealing with the aborigines of New South Wales, and contains many valuable and now unobtainable native weapons and implements.
- (4) *Murray Black Collection* of anatomical material representative of the aborigines of Southern Victoria and the River Murray.
- (5) *Nankivell Collection*, illustrating the anatomy of the aborigines of the Murray Valley.
- (6) *Harvard University Collection.*—This includes a collection of specimens from the Harvard University, U.S.A., representing a carefully worked out epitome of archaeology of the United States of America, and, together with two rare skeletons of primitive North American Indians, was a goodwill gift from the University to the Institute of Anatomy.
- (7) *The Sir Hubert Murray Collection.*—The ethnological and osteological collection of the late Sir Hubert Murray, formerly Lieutenant-Governor of Papua. This deals especially with the anthropology of Papua.
- (8) *The Rabaul Ethnological Collection.*—This concerns chiefly the ethnology of the Mandated Territory of New Guinea.
- (9) *The Basedow Collection.*—This collection has been recently purchased by the Commonwealth Government. It deals especially with the anthropology of Central and Northern Australia and was assembled, after many years of research, by the late Dr. Herbert Basedow of Adelaide, who was formerly Protector of Aborigines.
- (10) *The Crowther Collection* of stone artifacts of the extinct Tasmanian race. This collection was a gift of Dr. W. E. L. H. Crowther of Tasmania.
- (11) *Keith Goddard Australian Ethnological Collection.*—This collection has been donated by Mr. R. H. Goddard of Sydney and represents an important ethnological collection dealing with the aborigines of the Northern Territory. It includes also some specimens from the Pacific Islands.

- (12) Many hundreds of specimens and books received from numerous interested scientists, the most outstanding being those from Mr. E. Hill, of Nagambie, Victoria; Mrs. Harry Burrell, New South Wales; and medical books for the Library from the estates of the late Drs. Molloy, David Grant and Robert Stirling.

3. **Endowments for Orations and Lectures.**—In addition to the aforementioned donations of material, there have been several endowments for Orations and Lectures as follows:—

- (1) *The Anne MacKenzie Fund.*—Founded with a gift of £1,000 by the late Sir Colin MacKenzie in memory of his mother. The interest from the fund to be used to arrange for an oration or symposium to be delivered or held from time to time as circumstances warrant. The purpose of the lecture or symposium is to emphasize the importance of the prevention of disease.
- (2) *The Kendall Lecture in Veterinary Science.*—Endowed by the sons of the late Dr. W. T. Kendall who was the founder of the first Veterinary School in the Southern Hemisphere.
- (3) *The Charles Mackay Fund.*—Endowed by Miss C. Mackenzie with a gift of £607 as a memorial to her grandfather, an educationalist, who arrived in Melbourne in 1852 and died at Kilmore, Victoria. The purpose of the fund is to arrange a lecture or symposium known as the Charles Mackay Lecture or Symposium to be held from time to time as circumstances warrant. The lecture or symposium is to deal with the history of medical science.

4. **The Scope of the Institute.**—The building occupies a site which adjoins that reserved for the Australian National University.

The Institute consists of two separate and distinct entities. Portion of the original collection of anatomical specimens assembled by the late Sir Colin MacKenzie is arranged in two large museums which are open to the general public. The material in these museums has been arranged so as to present simple lessons in human hygiene as well as to display the anatomical features and especially the peculiarities of Australian fauna.

The remainder of the building houses research units which are studying problems in the biological and medical sciences. The large collections of bony anatomical material donated by Murray Black have provided most interesting and valuable data on aboriginal diseases.

In 1938, following upon the retirement due to ill-health of Sir Colin MacKenzie, the activities of the Institute were extended to interpret more fully the ideas of the founder. In the later years of his life Sir Colin had been keenly interested in the relationship of nutrition to the development of the child. In recent years the work of the staff has developed in laboratory and field research in problems of nutrition, and this work is being continued and developed particularly in association with the Institute of Child Health of the Commonwealth Department of Health, situated at the Sydney University.

§ 7. The Commonwealth Observatory.

1. **Foundation of Observatory.**—The Observatory was founded primarily to prosecute astrophysical research, including the study of the relations between solar and terrestrial phenomena. A short history of the foundation of the Observatory appears in *Official Year Book No. 19*, p. 979.

2. **Site of Observatory.**—The Observatory is situated on Mount Stromlo which forms part of a ridge of hills about seven miles west of Canberra. The highest point in the ridge is 2,560 feet above sea level, that is, about 700 feet above the general level of the surrounding country.

3. **Equipment.**—Some of the major items of astrophysical equipment have been obtained through the generosity of private donors. Thus a 30-inch reflector was donated by the late J. H. Reynolds, Esq.; a 9-inch refractor was presented by the late Mr. James Oddie; and the trustees of the late Lord Farnham made available a 6-inch refractor. Other major equipment comprises a solar tower telescope with an 18-inch coelostat and a 3-inch reversible transit instrument. The Observatory was the successful tenderer at a public sale for the purchase from the Victorian Government of the long disused 48-inch reflector of the now closed Melbourne Observatory. This instrument is being modernized so as to adapt it to the general astronomical programme of the observatory. A 74-inch reflector is being purchased.

4. **Functions of Observatory.**—In addition to covering the type of astrophysical research for which the Observatory was founded, the field of work has been extended to include experimental and theoretical investigations of the ionosphere, and the determination of time. The observatory is now responsible for the accuracy of the Australian Time Service. Considerable attention is being given to the development of this work, and a highly accurate quartz clock system has been installed. Investigations in the fields of double star astronomy, stellar spectroscopy, variable stars, terrestrial magnetism and cosmic rays are also being carried out.

§ 8. Standards Association of Australia.

The Standards Association of Australia is the national standardizing organization of Australia, and issues Australian standard specifications for materials and codes of practice.

The Association was established in July, 1929 by the amalgamation of the Australian Commonwealth Engineering Standards Association and the Australian Commonwealth Association of Simplified Practice. It is an independent body in close touch with modern industrial requirements and has the full recognition and support of the Commonwealth and State Governments and industry.

The sole executive authority of the Association is vested in the Council on which industry is fully represented, together with official representatives of the Commonwealth and State Governments and their technical departments, and of scientific, professional and commercial organizations. Voluntary assistance is rendered in the drafting of specifications and codes by more than 4,500 individuals who are experts in their particular fields and are organized into more than 500 committees. These committees are grouped under an internationally established classification, covering civil engineering and building construction, mechanical engineering, electrical engineering, automotive industry, transportation, naval architecture and marine engineering, shipbuilding, ferrous metallurgy, non-ferrous metallurgy, chemical industry, textile industry, mining, agriculture, wood industry, pulp and paper industry, glass and pottery, household and domestic economy, miscellaneous and general.

These committees are comprised of nominated representatives of manufacturing, distributing and purchasing organizations, and of scientific and other expert authorities in the particular field of the project being dealt with. The operations of these committees are co-ordinated and supervised by committees broadly representative of the whole industry, according to the foregoing classification, within which the respective projects are included.

The specifications of the Association provide a suitable standard of performance, quality and dimension and an equitable basis for tendering. They help to eliminate redundant qualities and sizes. They enable purchasers to obtain their requirements with greater assurance of satisfaction, with more rapid delivery and without the necessity of drafting individual specifications.

The underlying principles covering the preparation of the specifications and codes are that they shall be in accordance with the needs of industry; that the common interests of producer and consumer be maintained; that periodical revision should keep the work abreast with progress; and that standardization be arrived at by general consent without coercion.

Organizations, companies, firms and individuals interested in the work of the Association are eligible for subscription membership. Members are entitled to free copies of the publications of the Association and to the use of the library and its Special Information Service. Bibliographical research is undertaken for committees, members of the Association, and industry in general. Many hundreds of inquiries were answered during the last year.

The Association has international affiliations and the standards of all British and foreign countries are filed in the library and are accessible to members. It also administers the Australian National Committees of the International Electrotechnical Commission, the World Power Conference and the International Commission on Large Dams. The Association is also a member, representing Australia, of the International Organization for Standardization (ISO) and is an elected member of the ISO Council for the years 1947-1950 inclusive.

The Association is also the representative of the British Standards Institution, and all British standards may be purchased from head-quarters and branch offices in the various States.

The head-quarters of the Association are at Science House, Gloucester-street, Sydney, and branches of the Association are situated at Temple Court, 422 Collins-street, Melbourne; Sparkes Building, 183 Wickham-street, Valley, Brisbane; Alliance Building, Grenfell-street, Adelaide; Gledden Building, Hay-street, Perth; c/o Hobart Municipal Tramways, Lower Macquarie-street, Hobart; Department of the Interior, Canberra; and Howard Smith Chambers, Watt-street, Newcastle.

§ 9. Film Censorship.

1. *Legislation.*—The censorship of imported films derives its authority from Section 52 (g) of the Customs Act, which gives power to prohibit the importation of goods. Under this section, regulations have been issued prohibiting the importation of films except under certain conditions and with the consent of the Minister. The regulations provide, *inter alia*, that no film shall be registered which in the opinion of the Censor is (a) blasphemous, indecent or obscene; (b) likely to be injurious to morality, or to encourage or incite to crime; (c) likely to be offensive to the people of any friendly nation; (d) likely to be offensive to the people of the British Empire; or (e) depicts any matter the exhibition of which is undesirable in the public interest.

The regulations governing the exportation of Australian-made films are similar, with the addition that no film may be exported which in the opinion of the Censorship is likely to prove detrimental or prejudicial to the Commonwealth of Australia.

The Censorship consists of a Censorship Board of three persons and an Appeal Censor, the head-quarters being in Sydney. There is also a right of appeal to the Minister.

In addition to the censorship of moving pictures, the Censorship may refuse to admit into Australia any advertising matter proposed to be used in connexion with the exhibition of any film. In regard to films and advertising matter produced in Australia, legislation of a uniform nature is now operative in all States except South Australia. Under the State legislation the Commonwealth Film Censorship Organization acts as censor for the States concerned by virtue of agreements entered into between the Commonwealth and the respective State Governments.

2. *Import of Films.*—Imported standard size (35 millimetre) films dealt with by the Censorship for the year 1949 were as follows:—1,411 films of 3,397,028 feet passed without eliminations, 105 films of 710,520 feet passed after eliminations, and 2 films of 8,614 feet rejected in the first instance, making a total of 1,518 films of 4,122,771 feet (one copy). The countries of origin were as follows:—United States of America, 738 films of 2,605,190 feet; United Kingdom, 426 films of 1,036,986 feet; and 354 films of 480,595 feet from other countries.

There were also imported during 1949, 4,347 miniature films (16 millimetres) of 2,622,819 feet and 1,085 miniature films (9.5 and 8 millimetres) of 402,595 feet.

3. *Export of Films.*—The number of films exported for the year 1949 was 857 of 1,334,817 feet, of which 654 films of 1,125,370 feet were sent to places in the British Empire including Mandated Territories.

§ 10. Australian National Film Board.

1. Constitution and Functions.—The Australian National Film Board was inaugurated in April, 1945. Its duties as set out in the Cabinet Agendum authorizing its formation are “to expand, promote, assist and co-ordinate the production and distribution and the importation of films for purposes of school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion and immigration.”

The Board's constitution and functions were based on the recommendations of a Commonwealth Government inter-departmental committee which considered the suggestions of a conference of interested individuals and Commonwealth and State officials, including the Directors of Education, called in November, 1944 by the Ministers for Information and Post-war Reconstruction.

The Board consists of seven members appointed by the Commonwealth Government, one on the nomination of the Education Departments of the States. It was originally attached, for administrative purposes, to the Department of Information, through which Department and the Commonwealth National Library it carried out its functions. With the abolition of the Department of Information in March, 1950, administrative control of the Board was transferred to the News and Information Bureau of the Department of the Interior.

The News and Information Bureau produces, or supervises the production by commercial enterprises of, all films authorized by the Board and arranges for their theatrical distribution generally and their non-theatrical distribution outside Australia.

The Commonwealth National Library arranges for the acquisition of films other than Board productions, and has control of their non-theatrical distribution within Australia. There is an Advisory Committee to the Board in each of the States which acts as the agent of the Library in the non-theatrical distribution of films.

2. Organization and Production.—The film-making section of the News and Information Bureau is a well-equipped organization. Its nucleus was the Cinema and Photographic Branch of the Department of Commerce and Agriculture, which had been making publicity films for the Commonwealth Government for nearly twenty years before the war, and the Official War Photographers' unit of the Department of Information, which had its films processed by the trade in Sydney. The Cinema and Photographic Branch carried out its film-making activities in Bright-street, Melbourne. Unfortunately, its premises, together with the greater part of its equipment, were destroyed by fire in March, 1946.

For the next two years the Film Division worked under extreme difficulties. Temporary premises to house the various sections of the Division could not be found. A small laboratory was improvised in Melbourne to process 16mm. films, but the major activities of the Division were carried out in various trade establishments in Sydney. In 1948, however, the Division entered into possession of a studio at Burwood, Sydney, which had been converted from a school hall lent for the purpose by the Education Department of New South Wales, at a cost of approximately £20,000. This studio has excellent editing, cutting and sound recording facilities, but processing of all 35mm. film has still to be carried out by the trade in Sydney.

The Film Division makes, on an average, about 35 films a year (most of them single reels, although films of up to five reels have also been produced) as well as a number of national appeal shorts. The single reel films include a monthly film magazine known as the Australian Diary. The programme authorized by the Board includes films required by other Commonwealth Departments for information or publicity purposes.

During the year 1948-49 the Board authorized the production of films worth nearly £75,000, of which films sponsored by other Commonwealth Departments accounted for nearly £20,000.

The News and Information Bureau has a number of film units operating continuously, but also places contracts with commercial organizations.

3. **Distribution.**—Board films are designed primarily for informational and educational purposes, but a good many of them have been accepted for theatrical release in Australia, New Zealand, and the United Kingdom. Some are being released theatrically in the United States of America and Malaya, while others are being televised in the United States and the United Kingdom. All of them are being shown non-theatrically in overseas countries where the Commonwealth Government is represented officially. Several Board films have attracted favorable attention from overseas film societies.

As in the field of production, the News and Information Bureau co-operates closely with the film trade in the field of distribution. It has its representative on the National Film Council which arranges for the theatrical distribution of Government publicity shorts on subjects of national importance.

4. **Non-Theatrical Distribution.**—The Commonwealth National Library has built up a very comprehensive collection of documentary, educational and instructional films and other visual aids from all countries, having acquired them either by purchase, gift or exchange. Together with its agents in the States it has made great progress in the non-theatrical distribution of films.

§ 11. Australian Broadcasting Commission.

1. **General.**—The Australian Broadcasting Commission was established in 1932 to take over control of national broadcasting in Australia from the Australian Broadcasting Company, which had been in existence since 1924. In establishing the Commission the expressed object of the government of the day was to raise the standards of broadcasting in Australia. Control of the Australian Broadcasting Commission was vested in five commissioners, and it derived its finances from a portion of the licence fees paid by persons owning radio sets. This method of control and finance remained practically unchanged until December, 1948, when an Act was passed increasing the number of the commissioners to seven, one of whom was to be an officer of the Treasury and one an officer of the Postmaster-General's Department; the Act also changed the method of finance so that the Australian Broadcasting Commission now receives its income from an annual government grant, which bears no direct relation to the total amount collected in licence fees. The technical services of the Australian Broadcasting Commission are, as laid down in the Act of 1932, still provided by the Postmaster-General's Department.

Broadcasting in Australia is a compromise between the system in operation in Great Britain and that in the United States, and the duty of the Australian Broadcasting Commission is to maintain the standards of radio without either dictating to its listeners or playing down to the lowest tastes. Space does not permit of a complete review of its activities since 1932, but in the following paragraphs are set out a few facts of interest concerning some of its departments.

2. **Music.**—The Australian Broadcasting Commission is to-day the biggest concert-giving organization in the Commonwealth, and the immense growth of interest in music in this country is illustrated by the fact that Australian listeners in increasing numbers now welcome the opportunity of hearing fine music on the air and in the concert hall and have magnificently supported the presentation of orchestral concerts and of recitals by the best musicians from their own country and from overseas. In 1936 small regular orchestras were formed by the Australian Broadcasting Commission in Sydney, Melbourne, Adelaide, Brisbane, Perth and Hobart, and from these foundations have grown our present orchestras. Those in Sydney and Melbourne measure up to first class orchestras overseas, whilst those in the other capital cities are showing rapid improvement and are now the equal of those in many places of comparable size in Europe or America. Until 1946 the financing of these orchestras was the sole responsibility of the Australian Broadcasting Commission, but since then arrangements have been made in all States for local government and municipal bodies to bear part of their cost; in South Australia the cost is partly met by donations from the public. This close co-operation between a broadcasting organization, city authorities and State Governments to establish and maintain symphony orchestras is unique in the world.

In 1949, the Australian Broadcasting Commission organized 413 public orchestral concerts and 125 public recitals by solo artists throughout the Commonwealth.

The policy of the Australian Broadcasting Commission so far as individual artists are concerned has always been to develop local talent and at the same time to give its audiences the opportunity of hearing famous international musicians.

3. **Drama.**—There are many thousands of Australians to-day who not only have never seen a stage play but have never even had the opportunity of doing so. Radio drama has been able to bring to them the best plays of all ages and countries. The Australian Broadcasting Commission has two regular weekly drama programmes—"Saturday Night Drama" which presents the more popular material, and "Radio Repertory" in which classical and outstanding contemporary plays are broadcast. In addition, "National Theatre of the Air", which is a monthly feature, presents rather longer plays of the type of "Radio Repertory".

During the year 1948-49 nearly 50 per cent. of the plays presented were written by Australian authors. Many of the other plays broadcast were adapted for radio by Australian playwrights. The Drama Department encourages the submission of original work by local dramatists, and is always anxious to receive material for consideration.

4. **Youth Education.**—The Australian Broadcasting Commission provides a regular series of broadcasts to schools as an addition to normal class-room education. The total number of listening schools at the end of 1949 was 6,156 or nearly 60 per cent. of all schools, State and private, throughout the Commonwealth. Many of the school broadcasts are presented in dramatized form, as this method makes the material more vivid and interesting to the young listener. For the very young children, the Commission broadcasts every week day the "Kindergarten of the Air", which originated in Western Australia during 1942, at a time when kindergartens were closed by the threat of Japanese invasion. These broadcasts were the first of their kind anywhere in the world and are now not only presented in every State of the Commonwealth, but have recently been introduced in England, Canada and some European countries.

5. **Talks.**—The aim of the Talks Department is to provide programmes which will keep the listener well informed on current affairs and on general and historical topics. Many of the talks in the first category are now presented in a magazine type of session consisting of a number of short items linked by a narrator. This form of programme has proved popular with listeners but has by no means replaced the straight talk which usually runs from ten minutes to a quarter of an hour.

Two sessions which are designed to encourage discussion are the "Nation's Forum of the Air", and the talks designed for listening groups. In the former, a topic of a controversial nature is discussed by four speakers before a studio audience. After their initial speeches, the speakers are questioned by members of the audience or by local listeners who send their questions by telephone. In the talks to listening groups, supplementary material relating to the broadcasts is provided for groups of listeners, organized by the Australian Broadcasting Commission, who meet in their homes or elsewhere to discuss points arising from the broadcast.

6. **Rural Broadcasts.**—The Rural Broadcasts Department was commenced in 1945 to serve the needs of country listeners. It has proved to be of great value to men and women on the land throughout Australia, by giving them the latest market reports and information on general conditions, and by keeping them informed on rural development overseas. Programmes are exchanged with radio organizations in England, Canada, the United States and elsewhere, and several visits to Australia by well-known farm radio personalities have also been arranged. The department has encouraged the work of Junior Farmer's Clubs in Australia, and has sponsored competitions for members in connexion with the Royal Agricultural Shows in Sydney and Melbourne. These competitions are now being extended in 1950 to cover Great Britain and New Zealand in order to encourage international co-operation in this important work.

7. **News.**—On 1st June, 1947, the Australian Broadcasting Commission's independent News Service came into full operation. Since that date the Commission has collected the news for its bulletins independently of the press and it now has, in addition to a large staff throughout Australia, a London news room for the selection and transmission of overseas news scoured from the great news agencies. Nine national news bulletins are broadcast daily, and are followed by State bulletins of news of State interest. In addition, two regional bulletins are broadcast by local stations in country areas. The Commission also rebroadcasts, by arrangement with the British Broadcasting Corporation, two overseas news bulletins each day.

8. **Other Activities.**—The broadcasting of the proceedings of Federal Parliament commenced as a regular service in July, 1946, and Australian listeners are now able to hear full debates from the House of Representatives, and occasionally the Senate. At present these broadcasts are confined to one of the two transmitters in each capital city, but it is hoped that eventually country listeners will also be able to hear these broadcasts through the medium of shortwave transmissions.

The Children's Session is presented on each week day for children between the ages of 7 and 17. An important feature of this session is the Argonauts Club which children may join, and which encourages its members to contribute to the programmes and to do creative work such as painting, needlework, writing, poetry, etc. Part of the children's session is regularly devoted to an exchange of opinion on topical questions by members of the Argonauts Club.

The Australian Broadcasting Commission's variety and sporting programmes provide the lighter side of listening to the public. In its variety sessions the Australian Broadcasting Commission does everything possible to assist local artists in order to increase the amount of first class talent in this country. The Commission's dance bands in Sydney and Melbourne provide the accompaniment for the more important variety shows broadcast in these states, and are regarded as being two of the most outstanding bands in Australia.

The Australian Broadcasting Commission's coverage of sport at home and abroad is comprehensive. On Saturday afternoons the sporting panel provides listeners with the progress results and scores, and also descriptions from half a dozen or more fields of sport. Events of international interest such as Test Matches, the Davis Cup etc., are covered by simultaneous descriptions from Australian Broadcasting Commission commentators. In covering events overseas, the Australian Broadcasting Commission is indebted to the British Broadcasting Corporation for its collaboration in Great Britain, and the New Zealand Broadcasting Service for events in New Zealand.

In December, 1949 the Australian Broadcasting Commission's programmes were transmitted by 39 medium wave and 8 short wave stations. The 39 stations in operation at 30th June, 1948 are shown in Chapter V.—“Transport and Communication”, § 6 “Radio Telegraphy and Telephony”, page 226. The nine new stations which have come into operation since that date are as follows:—Medium wave stations—2NB (Broken Hill), 2NU (Manilla), 2TR (Taree), 5AL (Alice Springs), 2LG (Lithgow) and 4QY (Kamma); Short wave stations—VLI (Sydney), VLM (Brisbane) and VLX (Perth). One short wave station—VLG (Lyndhurst) was closed down. The short wave stations are used for giving service to listeners in the sparsely populated parts of Australia, and in New Guinea and adjacent islands. Twenty-seven of the medium wave stations are situated outside the capital cities, and further regional stations will be constructed in the near future. When the additions have been made, the regional net-work combined with the short wave stations will transmit the Commission's programmes with clear reception to every part of Australia.

§ 12. The National Safety Council of Australia.

The National Safety Council of Australia was founded in Melbourne in 1927 for the purposes of developing, mainly by means of education, safety on the road, at work and in the home, and its activities have developed in other directions wherever the need for reducing the toll of accidents has been shown. To this end it conducts continuous propaganda through the press and in other ways. It also forms Junior Safety Councils in the schools for developing a safety conscience among children. The children themselves are officers of these Councils and patrol the roads in the neighbourhood of the

schools and conduct the scholars across in safety. Posters are available to schools at cost in connexion with Health and Safety lessons in the schools. Small films specially taken are available for children's and home safety instruction.

A "Safe Driving" campaign for individual motor drivers is conducted as well as a "Freedom from Accidents" competition among employee drivers, those completing a year free from any accident for which they are responsible being given a certificate to that effect. An industrial service of four posters per month, together with slips for pay envelopes, constitutes a regular service for the dissemination of safety advice, and was supplied to over 100,000 workers in factories last year. Committees deal with specific problems regarding traffic, films, safety in industry, air safety and home dangers. The Air Safety Committee has issued a 32-page booklet "Air Sense" for distribution with pilots' private licences through the Civil Aviation Department, and has a plan for emergency night landings for aircraft in difficulties.

The Council is supported by a Government Grant, public subscription and sales of service, and is a non-profit organization. Its work is carried on by a small paid staff controlled by committees and governed by an executive. The following committees, whose work is of an entirely honorary nature, are in operation, namely, Executive, Traffic, Industrial Safety, Home, Air Safety and Propaganda.

§ 13. Commonwealth Disposals Commission.

Particulars of the constitution and functions of the Commonwealth Disposals Commission, its policy and procedure and an outline of its activities were given in Official Year Book No. 37 (*see* pp. 1194-6). A summary of the realizations of the Commission during the five years of its existence will be found in Chapter XXVI.—"Defence", § 9. "The Department of Supply and Development", page 1206.

§ 14. Division of Industrial Development.

A survey of the origin, development, functions and operations of the Division of Industrial Development prior to the abolition of the Department of Post-war Reconstruction in January, 1950 and the incorporation of the Division first in the Prime Minister's Department and later in the newly-created Department of National Development, will be found in Official Year Book No. 37, pp. 1196-7.

§ 15. Rent Control.

Prior to the outbreak of the 1939-45 War, rent control existed in Victoria and Queensland only. When hostilities commenced, the need became immediately apparent for more rigid control of the relationship between landlord and tenant in order to avoid rent inflation.

Accordingly, on 29th September, 1939, the Commonwealth, under its emergency powers, issued the National Security (Fair Rent) Regulations, providing for the establishment, in the various States, of Fair Rents Boards, and for the protection of tenants against eviction. An important feature of rent control in the Commonwealth up to this stage was that the fair rents regulations could not be enforced in any State by the Commonwealth Government, and their introduction was left to the discretion of the Governor-in-Council of the State concerned.

An increasing degree of control resulted from the National Security (Landlord and Tenant) Regulations, which were brought into operation on 28th November, 1941. Their general effect was to give greater security to tenants and to extend that security to tenants in States where in the opinion of the Government local legislation was inadequate.

New regulations gazetted on 15th June, 1945 provided for the appointment of a Commonwealth Rent Controller with power to fix the rent of rooms and other shared accommodation, the determination of rents of all other premises being still left with the Fair Rents Board. The Commonwealth Rent Controller, when appointed in July, 1945, immediately appointed deputies in the various States and Territories of the Commonwealth.

The power of the Controller was extended in December, 1946, when the jurisdiction of the Fair Rents Boards was transferred to the Controller. However, a right of appeal to a Fair Rents Board was provided by amendment of the regulations.

Under the Defence (Transitional Provisions) Acts the operation of the regulations was continued for a further period. However, since they were dependent for their validity upon the defence power contained in the Constitution, and the danger of a successful challenge in the High Court became increasingly great as time passed, a referendum was held on 29th May, 1948 to obtain approval for the Commonwealth to legislate on rents and prices (including charges). On defeat at the referendum, the Commonwealth Government decided to return various controls, including that over rents and evictions, to the States. The transfer was effected on 16th August, 1948, so far as New South Wales, Victoria, South Australia, Western Australia and Tasmania were concerned, and on 1st September, 1948 in the case of Queensland.

For further details of the provisions and operation of the various regulations issued, see Official Year Book No. 37, pp. 1197-1200.

§ 16. Housing Division.

In July, 1945 the Commonwealth Government created the portfolio of Works and Housing, thus amalgamating under one Minister a number of housing functions previously shared by several Commonwealth Departments. Within the new department the Housing Division was charged with the exercise of most of these functions. In March, 1950 the Housing Division was incorporated in the newly established Department of National Development, with particular functions similar to those previously exercised and the overall responsibility for stimulating housing and building construction within the framework of the approved programme of developmental work.

One of the major responsibilities of the Division is the administration of the Commonwealth and State Housing Agreement, under which the Commonwealth and State Governments are co-operating in a plan to provide good standard homes for families in the moderate income groups. Under this agreement the Commonwealth Government has agreed to advance to a State the money spent on housing projects by the State between 3rd December, 1943 and the date of the agreement, and the amount required for the State's housing projects during the next ten years. Each advance and interest thereon is to be repaid in equal annual instalments within a maximum period of 53 years from the date the advance is made, the interest to be at a rate not exceeding that payable in respect of the latest Commonwealth loan at the date of the advance. A feature of the rental provisions of the agreement is a system of rental rebates, whose basic principle is that a family with income at the basic wage level need not pay more than one-fifth of its income in rent, regardless of the economic rent of the dwelling. As the family income rises above or falls below the basic wage, so does the rebate diminish or increase. The Commonwealth bears three-fifths, and the State concerned two-fifths, of all losses occasioned by the rental rebate system. The agreement also provides for the sale of dwellings to tenants.

From the inception of the Commonwealth and State Housing Agreement in April, 1944 to 31st January, 1950, the five States operating under the agreement (South Australia, although a signatory, has not yet operated under the agreement) had completed 27,340 dwellings. A further 9,828 dwellings were under construction at that date. In the period mentioned, the Commonwealth advanced £56,572,000 to the States to finance the acquisition and development of land and the construction of dwellings.

The Housing Division, in administering the agreement, examines technical and financial aspects of housing by the State Housing Authorities. Close attention is given to uniform treatment, as between the States, in applying the different provisions of the agreement, and to ensure that the Commonwealth's interests are safeguarded and the terms of the agreement observed.

As part of its policy of assisting the Australian housing programme, the Division is engaged in many tasks, including the development, under the aegis of the Standards Association of Australia, of housing specifications and codes for low income group housing, the review of local supplies of materials, components, fittings, equipment, tools and labour; examination, with other bodies, of the application of new types of materials

and methods of construction to low-income housing and proposals for the importation of complete dwellings, components, building materials and labour. Special attention has been given to housing for basic industries especially coal and steel.

To keep Australia abreast of housing developments, the Division undertakes technical and economic research on various aspects of housing, and maintains a close watch on the latest thought and practice in developments overseas. Methods and policies that might be useful to State Housing Authorities and other interested bodies are published in *Australian Housing*, a bulletin issued by the Division at regular intervals, and a regular flow of informative material is maintained to authorities in all States.

The Division has been responsible for the development of the Australian Housing Cost Index as part of its continuous task of examination and analysis of house building costs. The index is published at quarterly intervals, and shows the trend in housing costs in the six capital cities of the Commonwealth.

Finally, the Division is concerned with other tasks related to its general function of expediting the housing programme. Recently, these have included such questions as the special problems arising from slum clearance, the housing needs of different sections of the community—e.g., old persons and service personnel, review of prefabricated housing proposals, continuing research into possible economies in the use of building materials, especially timber, and into the desirability of modernizing local government building regulations, and decentralization.

§ 17. War Service Homes.

The provision of War Service Homes is a function of the Department of Works and Housing and the administration of the War Service Homes Act is under the immediate control of the Director of War Service Homes.

The War Service Homes Act 1918-1949 is a measure for the provision of homes for Australian soldiers who served during the 1914-18 War or during any war in which His Majesty became engaged on or after 3rd September, 1939; also to the female dependants of Australian soldiers and other classes of eligible persons as defined in the Act. Assistance may be granted to an eligible person and the wife or husband of that person, as the case may be, as joint tenants.

The maximum amount of loan or advance which may be granted under the Act is £2,000, and periods of repayment may be approved up to 45 years; in the case of a widow or widowed mother of an Australian soldier this may be extended to a maximum of 50 years.

The War Service Homes Division does not provide homes for occupation on a purely tenancy basis.

Since the inception of operations under the War Service Homes Act (figures in parentheses indicate cases where eligibility has been established and assistance granted as a result of service during the 1939-45 War) 65,015 (19,139) applications have been approved; 25,834 (4,201) homes have either been built, or assistance to build them has been given; 18,841 (5,617) homes have been purchased; and 5,372 (2,202) mortgages have been discharged. The total number of homes provided under the War Service Homes Act to 30th June, 1949 was 50,047, including 12,020 to persons who served during the 1939-45 War.

In addition, the Division had approved of 8,312 transfers and resales of which 574 were in respect of persons whose eligibility had been established as a result of service during 1939-45.

During 1948-49 8,066 (7,766) applications were approved; 2,525 (2,440) homes were either built or assistance to build them was given; 2,620 (2,534) homes were purchased; and 939 (909) mortgages were discharged. The total number of homes provided during the financial year 1948-49 was 6,084 (5,883). Transfers and resales approved numbered 201 (109).

At 30th June, 1949, 4,016 homes, including 1,691 group projects, were in course of construction; 1,141 contracts, of which 312 were for group homes, had been let but work not started, and 1,192 tenders, including 394 for group homes, had been called but not finally dealt with. The majority of these homes are being provided for persons who served during the 1939–45 War.

The total capital expenditure from inception to 30th June, 1949 was £45,648,752, including £8,566,314 for 1918–49. The net capital expenditure for 1948–49, after allowing for unexpended advances as at 30th June, 1949, was £8,551,902. Receipts from inception to 30th June, 1949 amounted to £41,049,636, including £2,023,711 during 1948–49. Of the total receipts, £18,744,206 has been paid to the National Debt Sinking Fund, including £1,356,848 for 1948–49.

At 30th June, 1949 the total amount of insurances in force, including cover notes, amounted to £35,241,474. The premium income for 1948–49 amounted to £39,976, and expenditure from the War Service Homes Insurance Trust Account to £16,007.

At 30th June, 1949, arrears of instalments outstanding amounted to £272,189 or 0.76 per cent. of the total instalments due. These arrears include the sum of £165,237 which has been capitalized in accordance with the provisions of the War Service Homes Act as amended in December, 1932, and arose out of the economic depression. The capitalized arrears form part of the balance of loans and/or advances outstanding at 30th June, 1949.

§ 18. New Building.

1. *General.*—The statistics in this section relate to the operations of private contractors, Government authorities and owner-builders, with the exception of those relating to employment, which exclude the numbers of persons working on owner-built houses. In general, they relate to *new* building only, and data on alterations, additions, renovations and repairs to buildings are excluded, because of the difficulty in obtaining complete lists of persons who engage in these operations. Figures for houses exclude converted military huts, flats and shop dwellings. Some houses built on farms are excluded but these do not affect the figures materially.

The following definitions of terms used in this section are necessary to understand the data presented :—

Owner-Builder. A person who is actually building his own house or is having his house built under his own direction without the services of a contractor.

Commenced. A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, it is probable that interpretations placed upon it by informants are not entirely uniform.

Completed. A building is regarded as having been completed when the builder has fulfilled the terms of the contract. As with commencements, the interpretations placed upon this definition may vary.

Under Construction. A building remaining uncompleted at the end of a period is regarded as being under construction, regardless of whether construction was actively proceeding on that particular date.

Employment. The figures of employment relate to persons actually working on new buildings on a specified day. They include working principals, employees, men working as, or for, sub-contractors and men temporarily laid off on account of weather. In addition, they include some employees engaged on alterations, additions, renovations or repairs to buildings *when these jobs are undertaken by a contractor who builds new buildings*. The figures exclude persons working on owner-built houses.

Values. All values shown exclude the value of land and represent the estimated value of buildings on completion.

2. *Value of New Buildings.*—(i) *Completed, 1948-49.* The following table shows the value of all new buildings completed in each State during 1948-49, according to the kind of building. It should be remembered that all values shown exclude the value of land and represent the estimated value of buildings on completion.

NEW BUILDINGS COMPLETED, 1948-49 : VALUE.

(Including Estimated Value of Owner-built Houses).

(£'000.)

Kind of Building.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Houses—								
Brick, Brick Veneer, Concrete and Stone..	12,967	12,952	1,875	4,428	2,010	977	314	35,523
Wood (Weatherboard, etc.) ..	2,848	7,763	7,024	53	227	1,900	103	19,918
Fibro Cement ..	11,908	1,472	1,455	645	1,523	110	121	17,234
Other ..	98	355	124	31	36	5	..	649
Total Houses ..	27,821	22,542	10,478	5,157	3,796	2,992	538	73,324
Flats ..	1,469	528	34	10	..	29	32	2,102
Shops with Dwellings ..	199	287	43	3	19	30	3	584
Shops without Dwellings	119	67	78	45	31	32	..	372
Hotels, Guest Houses, Boarding Houses, etc.	103	65	18	58	7	107	179	537
Factories ..	1,996	1,749	325	473	220	334	1	5,098
Other new Buildings ..	2,030	2,119	1,223	737	634	286	4	7,033
Total Other Buildings..	5,916	4,815	1,721	1,326	911	818	219	15,726
Total New Buildings ..	33,737	27,357	12,199	6,483	4,707	3,810	757	89,050

(ii) *Commenced, Completed and Under Construction, 1945-46 to 1948-49.* The following table summarizes the values of all new buildings commenced, completed and under construction for each State for the years 1945-46 to 1948-49.

NEW BUILDINGS : VALUE.

(Including Estimated Value of Owner-built Houses.)

(£'000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
COMMENCED.								
1945-46	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1946-47	30,458	20,422	9,319	4,848	3,036	2,718	749	71,550
1947-48	36,196	26,841	12,093	5,341	4,420	3,607	2,606	91,104
1948-49	45,154	36,325	13,192	7,599	5,825	5,371	1,722	115,188
COMPLETED.								
1945-46	9,305	5,471	3,320	1,682	974	627	112	21,491
1946-47	17,097	11,067	7,257	2,744	2,117	1,417	310	42,009
1947-48	24,305	17,891	10,390	4,080	3,328	2,279	509	62,782
1948-49	33,737	27,357	12,199	6,483	4,707	3,810	757	89,050
UNDER CONSTRUCTION AT END OF YEAR.								
1945-46	14,614	9,817	3,164	2,387	1,571	1,403	430	33,386
1946-47	30,041	19,333	5,337	4,774	2,872	2,759	884	66,000
1947-48	44,461	29,573	7,232	6,170	4,452	4,146	3,013	99,047
1948-49	59,172	41,607	8,479	7,735	6,416	5,872	3,956	133,237

(a) Not available.

3. **Numbers of New Houses.**—(i) *Completed, 1948-49.* The following table shows the numbers of new houses completed in each State during 1948-49, according to the material of their outer walls.

NEW HOUSES COMPLETED, 1948-49 : NUMBER.

(Including Owner-built Houses.)

Material of Outer Walls.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
Brick, Brick Veneer, Concrete and Stone ..	6,301	7,118	1,149	3,349	1,374	534	148	19,973
Wood (Weatherboard, etc.) ..	2,162	5,591	6,524	61	277	1,606	74	16,295
Fibro Cement ..	9,326	1,309	1,530	545	1,553	140	101	14,504
Other.. ..	75	260	151	34	40	7	..	567
Total	17,864	14,278	9,354	3,989	3,244	2,287	323	51,339

(ii) *Commenced, Completed and Under Construction, 1945-46 to 1948-49.* The next table provides a summary, by States, of the numbers of new houses commenced, completed and under construction for the years 1945-46 to 1948-49.

NEW HOUSES : NUMBER.

(Including Owner-built Houses.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
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COMMENCED.

1945-46	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
1946-47	17,720	12,981	8,925	3,269	2,405	1,642	323	47,265
1947-48	19,807	14,878	9,528	3,580	3,075	2,062	393	53,323
1948-49	21,291	15,487	9,361	4,561	3,843	2,849	534	57,926

COMPLETED.

1945-46	5,596	3,666	3,385	1,332	860	479	58	15,376
1946-47	12,187	7,436	7,746	2,227	1,792	1,070	149	32,607
1947-48	14,858	11,846	9,204	3,009	2,771	1,544	271	43,503
1948-49	17,864	14,278	9,354	3,989	3,244	2,287	323	51,339

UNDER CONSTRUCTION AT END OF YEAR.

1945-46	9,200	6,135	2,441	1,559	865	1,013	188	21,401
1946-47	14,737	11,680	3,627	2,654	1,521	1,557	368	36,144
1947-48	19,686	14,712	3,951	3,203	1,841	2,065	491	45,949
1948-49	23,113	15,921	3,958	3,940	2,439	2,575	696	52,642

(a) Not available.

4. **Numbers of New Flats.**—The figures in the two foregoing tables do not include particulars of new flats. The summary below shows the numbers of new flats commenced, completed and under construction in Australia for the years 1945-46 to 1948-49, together with State details for 1948-49. It should be noted : (i) that the figures are additional to the numbers of houses shown in other tables, (ii) that each flat is counted as a separate unit, and the numbers shown therefore relate to individual flats, and (iii) that new flats only are included, i.e., the conversions of old buildings into flats are omitted.

NEW FLATS : NUMBER.

(Individual Flats).

State.	Commenced during Period.	Completed during Period.	Under Construction at end of Period.
1948-49—			
New South Wales	1,302	894	1,549
Victoria	505	368	643
Queensland	19	32	..
South Australia .. .. .	..	6	..
Western Australia	17	..	17
Tasmania	34	25	27
Australian Capital Territory	144	20	180
Total	2,021	1,345	2,416
Total, 1947-48	1,581	768	1,734
„ 1946-47	1,035	319	923
„ 1945-46	(a)	46	197

(a) Not available.

5. *Persons engaged in New Building.*—The following table shows, by States, the number of persons (including contractors and sub-contractors actually working on jobs) engaged on jobs *carried out by builders of new buildings* at 30th June, 1946, 1947, 1948 and 1949. Particulars for 30th June, 1949 show the numbers of tradesmen, contractors, sub-contractors and wage earners engaged. For an explanation of the field of employment covered *see* par. 1 of this section.

PERSONS ENGAGED IN NEW BUILDING.
(Excluding Persons working on Owner-built Houses).

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Aust.
30th June, 1949—								
Carpenters	16,276	12,160	7,187	2,484	2,323	2,314	559	43,303
Bricklayers	4,124	2,550	639	1,221	586	280	135	9,535
Painters	3,468	2,574	1,326	628	470	283	108	8,857
Electricians	2,252	1,392	778	293	199	146	39	5,099
Plumbers	3,591	2,211	1,135	568	383	218	88	8,194
Builders' Labourers	6,655	4,131	1,790	1,448	1,325	1,102	330	16,781
Other	5,616	3,424	1,175	1,085	934	577	130	12,941
Contractors (a)	5,263	3,291	2,170	668	489	598	37	12,516
Sub-contractors (a)	4,980	3,493	1,220	795	448	331	58	11,325
Wage earners	31,739	21,658	10,640	6,264	5,283	3,991	1,294	80,869
Total	41,982	28,442	14,030	7,727	6,220	4,920	1,389	104,710
Total 30th June, 1948..	41,131	26,728	12,766	7,120	5,591	3,798	918	98,052
„ „ „ 1947..	34,845	22,111	12,184	6,454	5,242	3,369	702	84,907
„ „ „ 1946..	26,420	17,429	8,883	5,429	4,175	2,514	410	65,260

(a) Actually working on jobs.

§ 19. Clothing and Food Rationing.

1. **General.**—The rationing of clothing and certain foodstuffs was established early in the 1939–45 War, but has since been discontinued. For greater detail as to the scale of rationing *see* Official Year Book No. 36, pp. 1084–1090.

2. **Clothing.**—The principal reason for the continuance of clothing rationing during post-war years was shortage in supply of woven piece goods, in particular, cottons from overseas. For particulars of the position of Australia in this respect until the ending of clothing rationing on 21st June, 1948, *see* Official Year Book No. 37, p. 1206.

3. **Food.**—(i) *Review of Food Rationing.* Food rationing in Australia was introduced as a war-time necessity in 1942, in order to ensure that the foodstuffs in demand were so allotted as to meet the requirements of the Armed Services based upon Australia, and to provide for an equitable distribution among civilians.

The commodities subject to coupon rationing were Tea, Sugar, Butter and Meat. Sugar rationing was introduced on 31st August, 1942, and ended on 2nd July, 1947. The ration rate throughout the period was 1 lb. per head per week, plus an allowance for jam-making of 10 to 12 lb. per head per annum. The rationing of meat commenced on 17th January, 1944 and ceased on 21st June, 1948. The adult rate varied from 2½ lb. per head per week in 1944 to about 1.8 lb. per head per week in 1945, remaining at this level until rationing ended in 1948. The continuance of tea rationing into 1950 was due to the shortage of world supplies. The original ration rate was 1.6 oz. per head per week, but on 19th October, 1942 it was increased to 2 oz. and remained at that level until 2nd July, 1950, when rationing ceased. Although adequate supplies of butter were available to meet local requirements, rationing at the rate of 6 oz. per head per week was maintained until 16th June, 1950. The purpose of butter-rationing was to restrict local consumption so as to provide a maximum quantity for export to meet short supplies overseas, particularly in the United Kingdom.

(ii) *Foodstuffs not subjected to Coupon Rationing.* In addition to the commodities mentioned above, other items of foodstuffs were subjected to some measure of control under war-time conditions. These were not subject to coupon rationing, but their availability for civilian consumption was determined after other priorities had been met. The items included Bacon and Ham, Eggs, Milk, Cream and Rice. By 1949 there was little lack of supplies in these items, except for cream and rice. Restrictions on the sale of cream were lifted during 1950 while the distribution of rice reverted to the trade towards the end of 1950 and supplies have been made available for general consumption. Formerly the only supplies of both items entering civilian consumption in Australia were restricted to hospitals and approved medical cases, but resident Asiatics also received a weekly allowance of rice.

(iii) *Consumption of Rationed Foodstuffs.* In previous issues a table was published, showing the annual civilian consumption in Australia of foodstuffs which were rationed during the 1939–45 War, illustrating the reduced civilian consumption of these commodities brought about by rationing. The tables in the following section—Consumption of Foodstuffs and Beverages—give some idea of the position from 1945 onward.

§ 20. Consumption of Foodstuffs and Beverages.

1. **Quantities Consumed.**—Previous issues of the Year Book up to No. 36 included a statistical survey of the movement in the consumption in Australia, in total and per head of population, of a selected number of commodities over a period of years up to 1940-41 (see Official Year Book No. 36, pp. 1098-1100). In issue No. 37 these long-term comparisons were replaced by more detailed information covering consumption of the principal foodstuffs and beverages in annual periods since 1944, in comparison with average annual consumption during the three years ended 1938-39. In this issue the annual periods extend from 1945 to 1948-49.

The estimates of total consumption and consumption per head of population in Australia in the two tables following have been compiled by deducting net exports from production and allowing for recorded movements in stocks of the respective commodities. While the estimates may generally be accepted as reasonably accurate, there are some deficiencies to which attention should be directed. These relate chiefly to the quantities of poultry, game and fish (fresh and shell) and the quantities of visible oils and other fats entering consumption. In addition, little information is available on the quantities of vegetables, fruit, eggs, etc., which householders produce for their own requirements and the extent of wastage occurring in the marketing of foodstuffs. In all these cases careful estimates have been compiled from the best available data, and the quantities shown as entering consumption in Australia have been adjusted to allow for these circumstances. Other difficulties occur in the compilation of statistics of consumption for which no allowance has been made. These include (i) the absence of particulars of stock movements in a limited number of cases, (ii) the disposal of surplus Army stores after the close of the war and (iii) the purchase of foodstuffs on the civilian market and the despatch of these quantities overseas as gifts in bulk and by parcel post. These deficiencies, however, do not seriously impair the accuracy of the estimates compiled.

The estimates of consumption per head shown in the second table following have been checked, wherever possible, with data from other sources which confirm the reliability of the methods used. The data were obtained principally from the Food Consumption Survey conducted in 1944 by the Nutrition Committee of the National Health and Medical Research Council.

There has been a general upward movement in the consumption per head of population of most foodstuffs and beverages in Australia from the levels of consumption during the three years immediately preceding the 1939-45 War. The principal commodities which show a decline in consumption are meat, butter, tea and rice. Butter and tea were still subject to consumer rationing in 1948-49.

More detailed information on the consumption of foodstuffs and beverages is contained in the publication, *Report on Food Production and the Consumption of Foodstuffs and Nutrients in Australia*, issued by this Bureau.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES ENTERING CONSUMPTION ANNUALLY : AUSTRALIA.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1945. (a)	1946. (a)	1946-47.	1947-48.	1948-49. (b)
Milk and Milk Products—							
Fluid Whole Milk	Mil. gals.	161	185	209	222	234	236
Fresh Cream	'000 tons.	19.7	3.8	6.0	8.0	3.5	3.5
Condensed Milk (Sweetened and Unsweetened)	"	9.9	10.4	9.7	9.8	15.4	14.0
Concentrated Whole Milk ..	"	3.4	4.9	12.0	9.5	13.4	13.0
Powdered Milk—							
Full Cream	"	8.1	{ 9.0	{ 11.1	9.2	10.6	12.0
Skim	"						
Infants' and Invalids' Foods (including Malted Milk) ..	"	3.0	4.0	5.4	5.0	5.1	2.5
Cheese	"	13.4	18.0	20.7	20.6	18.6	17.8
Total (in terms of Milk Solids)	"	120.5	133.4	154.2	160.4	168.0	168.6
Meat—							
Beef (bone-in weight) ..	"	442.0	260.6	305.2	324.1	371.6	417.6
Mutton (bone-in weight) ..	"	183.4	180.0	168.1	154.7	150.8	148.3
Lamb (bone-in weight) ..	"	46.1	76.0	74.6	72.8	87.5	96.9
Pork (bone-in weight) ..	"	31.8	14.6	19.3	22.9	24.0	22.8
Offal	"	25.7	26.4	29.6	31.1	30.6	29.0
Canned Meat (canned weight)	"	(c)	5.5	8.0	8.5	10.0	8.4
Bacon and Ham (cured weight)	"	31.4	30.0	39.5	42.5	41.0	34.0
Total (in terms of carcass weight)	"	776.1	610.8	665.1	677.4	739.3	773.9
Poultry, Game and Fish—							
Poultry and Rabbits (carcass weight)	"	29.8	43.6	52.8	54.2	55.1	56.2
Fish—							
Fresh (edible weight) ..	"	19.7	15.8	17.3	20.0	19.4	19.8
Shell (edible weight) ..	"	2.1	1.1	1.4	1.4	2.2	2.7
Canned (edible weight) ..	"	12.4	0.5	9.2	8.5	12.1	10.8
Total (edible weight) ..	"	51.5	42.7	58.5	61.3	65.7	65.9
Eggs and Egg Products—							
Shell Eggs	"	78.7	87.3	88.2	89.3	85.9	84.6
Liquid Whole Egg (d) ..	"	2.9	9.2	7.2	8.6	7.6	9.6
Total (Shell Egg equivalent) ..	"	81.6	96.5	95.4	97.9	93.5	94.2
	mil. doz.	139.3	164.7	162.8	167.1	159.6	160.8
Fats and Oils—							
Butter	'000 tons.	101.0	78.5	82.8	84.9	84.7	84.5
Margarine—							
Table	"	2.8	1.0	2.3	2.4	3.3	3.5
Other	"	12.2	17.4	15.3	16.6	18.3	20.8
Lard	"	5.2	4.4	4.3	4.0	4.0	4.3
Vegetable Oils and Other Fats	"	14.4	12.0	13.9	13.6	13.8	14.1
Total (Fat Content) ..	"	115.5	96.8	101.4	103.8	106.0	108.8

See next page for notes.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES ENTERING
CONSUMPTION ANNUALLY: AUSTRALIA—continued.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1945. (a)	1946. (a)	1946-47.	1947-48.	1948-49. (b)
Sugar and Syrups—							
Refined Sugar—							
As Sugar	'000 tons.	216.5	220.8	231.6	221.0	246.0	236.6
In manufactured products ..	"	110.1	123.5	167.5	168.0	181.8	172.9
Honey and Glucose Syrups ..	"	21.9	21.7	24.1	24.2	24.7	24.9
Total (Sugar Content) ..	"	343.9	361.4	418.0	408.3	447.3	429.2
Potatoes—							
White	"	318.5	359.3	408.6	446.6	450.3	376.9
Sweet	"	7.4	7.8	5.5	5.6	5.3	5.0
Total	"	325.9	367.1	414.1	452.2	455.6	381.9
Pulse and Nuts—							
Dried Pulse	"	4.5	7.1	9.5	10.0	10.3	10.1
Peanuts (weight without shell)	"	2.8	1.8	6.5	7.9	8.9	9.5
Edible Tree Nuts (weight without shell)	"	2.6	1.3	2.3	3.0	5.1	4.9
Cocoa (Raw Beans)	"	6.3	10.0	10.3	10.9	11.8	12.0
Total	"	16.2	20.2	28.6	31.8	36.1	36.5
Tomatoes and Fruit—							
Tomatoes (e)	"	(f) 48.0	66.0	82.1	102.8	81.5	74.6
Citrus Fruit (e)	"	97.8	84.6	109.3	112.3	132.6	123.3
Other Fresh Fruit	"	264.0	298.7	310.2	308.8	344.1	333.9
Jams	"	35.1	37.6	49.4	40.7	48.5	38.7
Dried Fruit	"	24.8	25.3	26.0	27.0	28.6	35.3
Canned Fruit	"	31.9	19.6	26.0	28.1	37.4	42.8
Total (Fresh Fruit Equivalent)	"	548.6	581.1	646.2	670.7	721.9	722.7
Vegetables—							
Leafy, Green and Yellow Vegetables	"	(g)	181.4	192.8	179.2	162.5	176.1
Other Fresh Vegetables	"	(g)	282.9	291.1	268.5	255.3	277.0
Canned Vegetables	"	(g)	3.1	9.4	12.9	8.7	11.1
Total	"	(g)	467.4	493.3	460.6	426.5	464.8
Grain Products—							
Flour—							
White	"	574.0	582.1	625.5	645.2	647.8	671.0
Wheatmeal for baking	"		36.9	35.7	34.6	32.3	38.3
Breakfast Foods (h)	"	27.8	32.4	36.1	34.2	35.8	33.0
Rice (Milled)	"	12.2	2.5	3.0	3.2	2.8	3.3
Tapioca, Sago, etc.	"	3.7	..	..	1.6	3.5	2.0
Pearl Barley	"	3.0	2.0	3.0	2.5	1.5	1.5
Barley Meal and Polished Wheat (Rice substitute)	"	..	0.8	0.7	1.3	1.7	1.7
Edible Starch (Cornflour)	"	4.3	3.7	3.8	4.3	5.2	5.6
Total	"	625.0	660.4	707.8	726.9	730.6	756.4
Beverages—							
Tea	"	21.1	19.5	22.1	22.5	21.7	22.1
Coffee	"	2.0	3.1	3.5	3.8	3.3	3.3
Beer (i)	mil. gals.	77.9	94.6	99.7	119.5	118.2	139.4
Wine (i)	"	4.2	8.7	7.1	8.2	10.5	11.0

(a) Excludes consumption by Armed Services. (b) Subject to revision. (c) Included under fresh meat at its carcass weight. (d) In terms of weight of shell eggs. (e) Includes fresh equivalent of manufactured products. (f) Probably understated due to absence of complete data. (g) Not available. (h) Excludes breakfast foods from maize and rice. (i) Figures for 1945 and 1946 are for years ended June of year shown and include consumption by the Armed Services.

**ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES ENTERING
CONSUMPTION ANNUALLY PER HEAD OF POPULATION : AUSTRALIA.**

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1945. (a)	1946. (a)	1946-47.	1947-48.	1948-49. (b)
Milk and Milk Products—							
Fluid Whole Milk	gallon	23.4	27.5	28.5	29.5	30.6	30.2
Fresh Cream	lb.	6.4	1.2	1.8	2.4	1.0	1.0
Condensed Milk (Sweetened and Unsweetened)	"	3.2	3.5	3.0	2.9	4.5	4.0
Concentrated Whole Milk ..	"	1.1	1.6	3.7	2.8	3.9	3.7
Powdered Milk—							
Full Cream	"	2.6	{ 3.0	3.4	2.8	3.1	3.5
Skim	"			0.5	0.7	0.6	0.5
Infants' and Invalids' Foods (including Malted Milk) ..	"	1.0	1.3	1.6	1.5	1.5	0.7
Cheese	"	4.4	6.0	6.3	6.1	5.4	5.1
Total (in terms of Milk Solids)	"	39.3	44.4	47.1	47.8	49.2	48.4
Meat—							
Beef (bone-in weight)	"	144.1	86.7	93.2	96.5	108.9	119.9
Mutton (bone-in weight) ..	"	59.8	59.9	51.3	46.1	44.2	42.6
Lamb (bone-in weight)	"	15.0	25.2	22.8	21.7	25.6	27.8
Pork (bone-in weight)	"	10.4	4.9	5.9	6.8	7.1	6.6
Offal	"	8.4	8.8	9.0	9.3	9.0	8.4
Canned Meat (canned weight)	"	(c)	1.8	2.4	2.5	2.9	2.4
Bacon and Ham (cured weight)	"	10.2	10.0	12.1	12.7	12.0	9.8
Total { in terms of carcass weight	"	253.0	203.2	203.1	201.7	216.8	222.3
in terms of retail weight	"	179.6	144.3	144.2	143.2	153.9	157.8
Poultry, Game and Fish—							
Poultry and Rabbits (carcass weight)	"	9.7	14.5	16.1	16.1	16.1	16.1
Fish—							
Fresh (edible weight)	"	6.4	5.3	5.3	6.0	5.7	5.7
Shell (edible weight)	"	0.7	0.4	0.4	0.4	0.7	0.8
Canned (edible weight)	"	4.1	0.2	2.8	2.5	3.5	3.1
Total (edible weight)	"	16.8	14.3	17.8	18.2	19.2	18.9
Eggs and Egg Products—							
Shell Eggs	"	25.7	29.0	26.9	26.6	25.2	24.3
Liquid Whole Egg (d)	"	0.9	3.1	2.2	2.6	2.2	2.8
Total (Shell Egg equivalent) { No. 243	"	26.6	32.1	29.1	29.2	27.4	27.1
			293	266	267	251	248
Fats and Oils—							
Butter	lb.	32.9	26.1	25.3	25.3	24.8	24.3
Margarine—							
Table	"	0.9	0.3	0.7	0.7	1.0	1.0
Other	"	4.0	5.8	4.7	5.0	5.4	6.0
Lard	"	1.7	1.5	1.3	1.2	1.2	1.2
Vegetable Oils and other Fats	"	4.7	4.1	4.2	4.0	4.0	4.0
Total (Fat Content)	"	37.6	32.3	30.9	30.9	31.1	31.2
Sugar and Syrups—							
Refined Sugar—							
As Sugar	"	70.6	73.5	70.7	65.9	72.1	68.0
In manufactured products ..	"	35.9	41.1	51.2	50.0	53.3	49.6
Honey and Glucose Syrups ..	"	7.1	7.1	7.3	7.2	7.3	7.2
Total (Sugar Content)	"	112.0	120.2	127.6	121.6	131.2	123.3

See next page for notes.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES ENTERING
CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA
—continued.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1945. (a)	1946. (a)	1946-47.	1947-48.	1948-49. (b)
Potatoes—							
White	lb.	103.8	119.6	124.9	133.1	132.0	108.3
Sweet	"	2.4	2.6	1.7	1.7	1.5	1.4
Total	"	106.2	122.2	126.6	134.8	133.5	109.7
Pulse and Nuts—							
Dried Pulse	"	1.5	2.4	2.9	3.0	3.0	2.9
Peanuts (weight without shell)	"	0.9	0.6	2.0	2.3	2.6	2.7
Edible Tree Nuts (weight without shell)	"	0.8	0.4	0.7	0.9	1.5	1.4
Cocoa (Raw Beans)	"	2.1	3.3	3.3	3.2	3.5	3.5
Total	"	5.3	6.7	8.9	9.4	10.6	10.5
Tomatoes and Fruit—							
Tomatoes (e)	"	(f)15.7	21.9	25.1	30.6	23.9	21.4
Citrus Fruit (e)	"	31.9	28.1	33.4	33.5	38.9	35.4
Other Fresh Fruit	"	86.1	99.4	94.7	92.0	100.9	95.9
Jams	"	11.4	12.5	15.1	12.1	14.2	11.1
Dried Fruit	"	8.1	8.4	7.9	8.0	8.4	10.1
Canned Fruit	"	10.7	6.5	7.9	8.4	11.0	12.3
Total (Fresh Fruit equivalent)	"	179.3	193.2	197.2	199.7	211.8	207.4
Vegetables—							
Leafy, Green and Yellow Vegetables	"	(g)	60.3	58.8	53.4	47.7	50.6
Other Fresh Vegetables	"	(g)	94.1	88.8	80.1	74.9	79.8
Canned Vegetables	"	(g)	1.1	2.9	3.9	2.5	3.2
Total	"	(g)	155.5	150.5	137.4	125.1	133.6
Grain Products—							
Flour—							
White	"	187.1	193.7	191.0	192.2	189.9	192.7
Wheatmeal for baking	"		12.3	10.9	10.3	9.5	11.0
Breakfast Foods (h)	"		9.0	10.8	11.0	10.2	9.4
Rice (milled)	"	4.0	0.8	0.9	1.0	0.8	0.9
Tapioca, Sago, etc.	"	1.2	..	..	0.5	1.0	0.6
Pearl Barley	"	1.0	0.7	0.9	0.7	0.4	0.4
Barley Meal and Polished Wheat (Rice substitute)	"	..	0.3	0.2	0.4	0.5	0.5
Edible Starch (Cornflour)	"	1.4	1.2	1.2	1.3	1.5	1.6
Total	"	203.7	219.8	216.1	216.6	214.1	217.1
Beverages—							
Tea	"	6.9	6.5	6.7	6.7	6.4	6.3
Coffee	"	0.6	1.0	1.1	1.1	1.0	0.9
Beer (i)	gallon	11.3	12.9	13.4	15.9	15.5	17.9
Wine (i)	"	0.6	1.2	1.0	1.1	1.4	1.4

(a) Excludes consumption by the Armed Services. (b) Subject to revision. (c) Included with fresh meat at its carcass weight. (d) In terms of weight of shell eggs. (e) Includes fresh equivalent of manufactured products. (f) Probably understated due to lack of complete data. (g) Not available. (h) Excludes breakfast foods from maize and rice. (i) Figures for 1945 and 1946 are for years ended June of year shown and include consumption by the Armed Services.

2. Level of Nutrient Intake.—The table below shows details of the estimated supplies of nutrients available for consumption in Australia during annual periods since 1946-47 in comparison with the annual average for the three years 1936-37 to 1938-39. The table

has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of quantity consumption per head of population shown in the preceding table.

ESTIMATED SUPPLIES OF NUTRIENTS AVAILABLE FOR CONSUMPTION : AUSTRALIA.

(Per head per day.)

Nutrient.	Unit.	Average, 1936-37 to 1938-39.	1946-47.	1947-48.	1948-49. (a)
Calories	No.	3,114	3,204	3,299	3,322
Protein—					
Animal	gm.	58.7	54.4	58.2	59.4
Vegetable	"	30.8	34.9	36.4	34.9
Total	"	89.5	89.3	94.6	94.3
Fat	"	133.5	118.6	121.9	124.6
Carbohydrate	"	376.8	424.8	439.1	434.7
Calcium	mgm.	642	762	816	786
Iron	"	15.3	14.8	15.1	15.4
Vitamin A	I.U.	4,949	4,783	4,497	4,579
Ascorbic Acid	mgm.	85.6	99.5	98.0	90.9
Thiamin	"	1.4	1.5	1.5	1.5
Riboflavin	"	1.7	1.8	1.9	1.9
Niacin	"	18.2	16.6	18.3	17.9

(a) Subject to revision.

§ 21. Marketing of Australian Primary Products.

Prior to the outbreak of war the necessity for Commonwealth marketing legislation arose principally from difficulties encountered by the various Australian primary industries in oversea markets. Legislation of this kind usually resulted from consultations held between the Commonwealth Government and producers with a view to discovering a means whereby these difficulties could best be overcome. The essential element of this legislation was the establishment of producer-controlled industry boards, whose function was to control the oversea marketing of the product concerned. Agreement was reached by the Governments of the United Kingdom and the Commonwealth which enabled exports from Australia to proceed normally even before any contracts for the sale of commodities had been concluded.

On the outbreak of hostilities, the existence of statutory boards for the meat, dairy produce and fruit industries facilitated war-time organization. However, war-time conditions so dislocated the normal facilities for marketing many of our other primary products that, in the interests of producers and the community generally, it became necessary for the Commonwealth Government to organize the marketing of some commodities previously unaffected by marketing legislation. The experience already gained in marketing control enabled the Commonwealth Government to proceed quickly with the formation of committees and/or boards in the industries concerned, namely, wool, wheat, barley, potatoes, tobacco, apples and pears, hides and leather, sheep skins, rabbit skins, tallow and eggs. In the case of other commodities it was found essential to expand the controls already in existence and in some instances this involved the establishment of an authority in the industry additional to that already constituted under pre-war marketing statutes. For the greater part, these war-time authorities were set up by virtue of regulations under the National Security Act. Several of the war-time organizations set up under the National Security Act have since been superseded by permanent boards established by the Commonwealth Government to control oversea marketing.

Full details of the operations of both permanent and war-time boards and other authorities appointed to assist or control the marketing of Australian primary products are included in Chapter XIX.—Pastoral Production, Chapter XX.—Agricultural Production and Chapter XXI.—Farmyard, Dairy and Bee Products.

§ 22. Valuation of Australian Production.

1. **Net Value of Production.**—(i) *Australia.* The value of production for Australia is computed in accordance with the decisions reached at the Conferences of Australian Statisticians and principally at the Conference held in 1935. The figures published below have been compiled by the State Statisticians from the best data available, and relate to 1947-48. Comparable details for 1946-47 may be found in *Production Bulletin* No. 41, Part II., pp. 82-91. The adoption of substantially uniform methods of valuing production and of estimating elements of costs of production and marketing render the results comparable as between States.

Attention is directed to the fact that the value shown in the table refers only to recorded production and excludes the building and construction industry, those industrial establishments not classified as factories, and agricultural and farmyard produce obtained from areas of less than one acre.

The following is a brief explanation of the terms used in the table :—

- (a) "Gross value" is the value placed on recorded production at the wholesale price realized in the principal markets. (In cases where primary products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets.)
- (b) "Local value" is the gross production valued at the place of production and is ascertained by deducting marketing costs from the gross value. (Marketing costs include freight, cost of containers, commission and other charges incidental thereto.)
- (c) "Net value" represents the net return to the producer after deducting from the gross value costs of marketing and of materials used in the process of production. Materials used in the process of production include seed, power, power kerosene, petrol and other oils, fodder consumed by farm stock, manures, dips, sprays and other costs. No deduction has been made for depreciation and maintenance costs. This matter is more fully dealt with in *Production Bulletin* No. 42, Part II., issued by this Bureau.

It should be noted that costs of maintenance of farm buildings and fences have not been deducted from the value of production of rural industries, as particulars are not available for all States. In addition, there is an overstatement in the net value of production for New South Wales by the inclusion of power costs in rural industries. These costs, which amounted to £1,892,000 in 1940-41, have not been ascertained in later years. The value shown for Mines and Quarries in Tasmania is understated owing to the omission of Quarries. This understatement, however, is more or less offset by the inclusion of production costs in Mining. Production costs are not available for all States in respect of Fisheries, and Local Values have been used for this industry with consequent overstatement.

In the chapter dealing with each industry (except trapping and mines and quarries) tables will be found showing the total and per capita value of production for that industry by States for a series of years ending 1947-48.

GROSS, LOCAL AND NET VALUE OF RECORDED PRODUCTION: AUSTRALIA, 1947-48.
(£'000.)

Industry.	Gross Production valued at Principal Markets.	Local Value— Gross Production valued at place of Production.	Net Value of Production (without deduction of depreciation or maintenance).
Agriculture	265,060	237,081	208,746
Pastoral	215,391	199,735	193,048
Dairying	75,843	72,136	60,540
Poultry	26,712	23,990	16,745
Bee-farming	819	737	737
Total, Rural (a) ..	583,825	533,679	479,816
Trapping	7,865	7,303	7,303
Forestry	20,019	18,298	17,768
Fisheries	4,020	3,503	(b) 3,503
Mines and Quarries ..	52,036	51,466	42,581
Total, Non-rural ..	83,940	80,570	71,155
Total All Primary ..	667,765	614,249	550,971
Factories	(c) 489,296	(c) 489,296	489,296
Total, All Industries ..	1,157,061	1,103,545	1,040,267

(a) The term "Rural" is used to cover those industries ordinarily considered to be farm industries.
(b) Local value. Production costs not available for all States. (c) Net Value.

(ii) States. The following tables show the total net value of production, and the net value per head, for each industry and State during the year 1947-48.

NET (a) VALUE OF RECORDED PRODUCTION, 1947-48.
(£'000.)

Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Agriculture	71,003	48,173	22,730	39,939	22,964	3,937	208,746
Pastoral	70,622	41,314	37,614	16,335	16,815	4,348	193,048
Dairying	18,443	19,916	14,168	4,985	2,036	992	60,540
Poultry	6,956	5,976	806	1,914	375	718	16,745
Bee-farming	293	196	55	133	50	8	737
Total, Rural	173,317	115,575	75,373	63,308	42,240	10,003	479,816
Trapping	2,528	3,435	202	515	197	426	7,303
Forestry	5,741	3,494	3,394	1,700	1,605	1,834	17,768
Fisheries (b)	1,224	449	561	214	565	490	3,503
Mines and Quarries ..	22,285	2,297	4,379	3,519	5,883	4,218	42,581
Total, Non-rural ..	31,778	9,675	8,536	5,948	8,250	6,968	71,155
Total, All Primary ..	205,095	125,250	83,909	69,256	50,490	16,971	550,971
Factories	218,611	158,501	42,886	38,670	18,384	12,244	489,296
Total, All Industries ..	423,706	283,751	126,795	107,926	68,874	29,215	1,040,267

(a) See letterpress on page 1247.

(b) Local value.

**NET (a) VALUE OF RECORDED PRODUCTION PER HEAD OF
MEAN POPULATION, 1947-48.**

(£ s. d.)

Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Agriculture ..	23 12 4	23 5 8	20 8 6	61 4 7	45 2 7	15 0 10	27 6 5
Pastoral ..	25 9 9	19 19 4	33 16 1	25 0 10	33 0 11	16 12 2	25 5 4
Dairying ..	6 2 8	9 12 6	12 14 8	7 12 10	4 0 0	3 15 9	7 18 6
Poultry ..	2 6 3	2 17 9	0 14 6	2 18 9	0 14 9	2 14 10	2 3 10
Bee-farming ..	0 1 11	0 1 11	0 1 0	0 4 2	0 1 11	0 0 7	0 1 11
Total, Rural ..	57 12 11	55 17 2	67 14 9	97 1 2	83 0 2	38 4 2	62 16 0
Trapping ..	0 16 10	1 13 2	0 3 8	0 15 9	0 7 9	1 12 7	0 19 1
Forestry ..	1 18 2	1 13 9	3 1 0	2 12 1	3 3 1	7 0 1	2 6 6
Fisheries (b) ..	0 8 2	0 4 4	0 10 1	0 6 7	1 2 2	1 17 5	0 9 2
Mines and Quarries	7 8 3	1 2 3	3 18 8	5 7 11	11 11 3	16 2 4	5 11 6
Total, Non-rural	10 11 5	4 13 6	7 13 5	9 2 4	16 4 3	26 12 5	9 6 3
Total, All Primary Factories ..	68 4 4 72 14 3	60 10 8 76 12 0	75 8 2 38 10 10	106 3 6 59 5 8	99 4 5 36 2 7	64 16 7 46 15 6	72 2 3 64 0 11
Total, All Indus- tries ..	140 18 7	137 2 8	113 19 0	165 9 2	135 7 0	111 12 1	136 3 2

(a) See letterpress on page 1247.

(b) Local value.

2. **Productive Activity.**—The two tables, and comment thereon, last published in Official Year Book No. 36, relative to measurement of productivity are omitted from this issue pending revision in the light of changes in age composition of the population as revealed by the Census of 1947, and of changes in age and sex composition of persons engaged in production in recent years.

§ 23. Indexes of Production.

In the tables below, indexes of price and quantity production are given for the following industrial groups, namely :—Agriculture, Pastoral, Farmyard and Dairying, Gold and Other Minerals, and for all groups combined. The method used in calculating these indexes is the fixed base weighted aggregative method. Prices for any year are obtained by dividing value of production by quantity produced in that year, and the price indexes are computed by using as fixed quantity-multipliers, for the commodities involved, the average quantities produced over the period 1923-24 to 1927-28. For

the quantity indexes the fixed multipliers are weighted average prices over the same period, which are obtained by dividing the total value of any commodity for the period by the total quantity produced. Exactly the same method is used for the combined group indexes (i.e., for All Farming and Total) as for the indexes for individual groups.

PRIMARY PRODUCTION : INDEX-NUMBERS OF PRICES.

(Base : Average 1923-24 to 1927-28 = 1,000).

Year.	Agricultural.	Pastoral.	Farmyard and Dairying.	All Farming.	Minerals.		Total Primary.
					Gold.	Other, excluding Gold.	
1911 ..	695	455	597	560	973	482	558
1912 ..	652	537	664	597	973	525	595
1913 ..	641	524	633	581	973	523	580
1914 ..	1,083	591	680	774	973	514	754
1915 ..	753	784	836	782	973	578	767
1916 ..	728	879	881	827	973	674	816
1917 ..	848	960	860	906	973	846	901
1918 ..	1,008	963	950	976	973	832	964
1919-20 ..	1,489	1,010	1,144	1,196	1,170	861	1,167
1920-21 ..	1,285	949	1,452	1,145	1,289	919	1,127
1921-22 ..	981	666	1,008	829	1,215	912	840
1922-23 ..	1,025	880	1,070	960	1,075	905	957
1923-24 ..	902	1,117	1,023	1,028	1,014	931	1,020
1924-25 ..	1,050	1,101	901	1,052	1,066	1,020	1,049
1925-26 ..	1,095	902	1,026	988	973	1,041	992
1926-27 ..	976	866	1,024	929	973	1,044	939
1927-28 ..	977	1,015	1,025	1,004	973	964	1,000
1928-29 ..	884	893	1,043	914	973	933	916
1929-30 ..	829	724	990	803	973	902	813
1930-31 ..	574	571	792	608	973	852	632
1931-32 ..	634	491	712	575	1,372	692	593
1932-33 ..	600	480	636	546	1,672	640	566
1933-34 ..	597	715	625	660	1,768	638	670
1934-35 ..	662	532	674	599	1,948	643	617
1935-36 ..	710	685	742	702	2,006	686	715
1936-37 ..	840	765	794	795	1,984	742	803
1937-38 ..	751	705	865	747	1,990	820	766
1938-39 ..	677	608	905	680	2,019	705	696
1939-40 ..	675	707	911	729	2,228	736	745
1940-41 ..	760	752	876	775	2,442	813	796
1941-42 ..	778	802	919	813	2,448	889	836
1942-43 ..	896	882	1,004	907	2,395	944	925
1943-44 ..	1,006	919	1,037	968	2,395	981	984
1944-45 ..	1,237	914	1,026	1,042	2,408	1,033	1,056
1945-46 ..	1,196	922	1,060	1,038	2,452	1,128	1,060
1946-47 ..	1,368	1,237	1,122	1,264	2,466	1,324	1,281
1947-48 ..	1,837	1,720	1,262	1,686	2,466	1,802	1,704
1948-49 ..	1,637	2,046	1,544	1,825	2,466	2,312	1,873

PRIMARY PRODUCTION: INDEX-NUMBERS OF QUANTITY PRODUCTION.

(Base: Average 1923-24 to 1927-28 = 1,000).

Year.	Agricultural.	Pastoral.	Farmyard and Dairying.	All Farming.	Minerals.		Total Primary.
					Gold.	Other, excluding Gold.	
1911 ..	611	938	742	794	4,172	1,176	862
1912 ..	775	859	721	808	3,906	1,265	879
1913 ..	807	970	743	878	3,707	1,332	946
1914 ..	359	948	720	709	3,451	1,172	777
1915 ..	1,199	768	570	884	3,270	1,075	925
1916 ..	971	742	701	814	2,798	962	847
1917 ..	805	750	814	779	2,446	936	810
1918 ..	635	849	796	767	2,138	1,000	801
1919-20 ..	527	938	737	765	1,794	717	771
1920-21 ..	1,046	763	809	868	1,585	785	868
1921-22 ..	944	877	955	913	1,273	783	906
1922-23 ..	896	934	872	911	1,269	873	912
1923-24 ..	971	837	886	891	1,196	974	901
1924-25 ..	1,151	977	1,091	1,055	1,135	1,003	1,052
1925-26 ..	880	1,033	1,009	976	939	1,008	979
1926-27 ..	1,090	1,093	971	1,072	876	991	1,063
1927-28 ..	908	1,060	1,043	1,005	854	1,025	1,005
1928-29 ..	1,093	1,133	1,068	1,109	769	899	1,087
1929-30 ..	952	1,067	1,071	1,028	717	852	1,010
1930-31 ..	1,346	1,035	1,175	1,164	784	810	1,130
1931-32 ..	1,211	1,129	1,265	1,179	1,000	665	1,134
1932-33 ..	1,334	1,212	1,350	1,276	1,199	774	1,233
1933-34 ..	1,228	1,160	1,423	1,226	1,394	828	1,194
1934-35 ..	1,066	1,200	1,485	1,200	1,489	883	1,176
1935-36 ..	1,096	1,166	1,415	1,182	1,529	984	1,169
1936-37 ..	1,158	1,206	1,359	1,214	1,981	1,050	1,209
1937-38 ..	1,313	1,260	1,432	1,306	2,320	1,130	1,302
1938-39 ..	1,154	1,211	1,497	1,237	2,674	1,173	1,247
1939-40 ..	1,495	1,322	1,554	1,419	2,764	1,283	1,421
1940-41 ..	824	1,336	1,516	1,189	2,761	1,256	1,212
1941-42 ..	1,276	1,379	1,540	1,370	2,514	1,312	1,377
1942-43 ..	1,197	1,379	1,587	1,350	1,938	1,290	1,351
1943-44 ..	1,005	1,393	1,502	1,277	1,262	1,193	1,270
1944-45 ..	703	1,251	1,521	1,107	1,103	1,165	1,111
1945-46 ..	1,162	1,107	1,564	1,200	1,104	1,035	1,185
1946-47 ..	947	1,176	1,557	1,159	1,385	1,110	1,157
1947-48 ..	1,478	1,198	1,654	1,368	1,575	1,199	1,356
1948-49 ..	1,302	1,263	1,728	1,351	1,496	1,210	1,341

§ 24. The United Nations.

1. **General.**—The Moscow Declaration of 1943 concerning a new international organization for the maintenance of international peace and security marked the end of the League of Nations. The dissolution of the League, and the transfer of certain of its functions to the new body, the United Nations, have now been completed. Information concerning the League of Nations was given in issue No. 35 and earlier issues of the Official Year Book.

The Charter of the United Nations was drawn up by the delegates of fifty nations at the United Nations Conference on International Organization at San Francisco from 25th April to 26th June, 1945. Australia's ratification was deposited on the 1st-November, 1945. There are now 59 member states: Afghanistan, Argentina, Australia, Belgium, Bolivia, Brazil, Burma, Byelorussia, Canada, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, France, Greece, Guatemala, Haiti, Honduras, Iceland, India, Iran, Iraq, Israel, Lebanon, Liberia, Luxembourg, Mexico, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Panama, Paraguay, Peru, Philippine Commonwealth, Poland, Saudi Arabia, Siam, Sweden, Syria, Turkey, Ukraine, Union of South Africa, Union of Soviet Socialist Republics, United Kingdom, United States of America, Uruguay, Venezuela, Yemen, Yugoslavia.

The full record of the Conference is contained in the Report by the Australian Delegates on the United Nations Conference on International Organization held at San Francisco, United States of America, from 25th April to 26th June, 1945.

The Australian delegates to the Conference were the Rt. Hon. F. M. Forde, M.P., and the Rt. Hon. H. V. Evatt, K.C., M.P.

At San Francisco an Executive Committee and a Preparatory Commission were established, and when these bodies had completed their work of preparation for the first meeting of the United Nations, the General Assembly met in London on 10th January, 1946.

The principal organs of the United Nations are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice and the Secretariat.

2. **General Assembly.**—This is the forum of the United Nations. In it each member state is represented and has one vote. It meets in regular annual sessions and has provision for special sessions. It has power to discuss any matter within the scope of the Charter and to make recommendations upon it; an exception to this is provided by disputes which are before the Security Council. The Assembly elects the non-permanent members of the other major organs and considers annual reports from them. Upon the recommendation of the Security Council, it may expel a member which has persistently violated the principles of the Charter.

3. **The Security Council.**—This has the primary responsibility for the maintenance of international peace and security. It is composed of five permanent members namely China, France, the United Kingdom, the Union of Soviet Socialist Republics and the United States of America, and six non-permanent members with two-year periods of office, of whom three retire at the end of each year. The following are the non-permanent members of the Security Council at present: Cuba, Egypt, Norway (retiring at the end of 1950) and Ecuador, India, Yugoslavia (retiring at the end of 1951). On procedural matters, decisions are taken by an affirmative vote of any seven members. But on all other matters, decisions can only be made on the affirmative vote of seven members, including the concurring votes of all the permanent members. However, the powers which are parties to a dispute for peaceful settlement do not vote.

At the first election, three non-permanent seats were filled for one year only. Member states elected for this period were Egypt, Mexico and the Netherlands. Australia, Brazil and Poland were elected for two-year periods.

The Security Council is assisted by a Military Staff Committee consisting of the Chiefs of Staff of the permanent members of the Council. In the event of measures other than armed force failing to remove a threat to peace, plans for the application of armed force are made by the Security Council with the assistance of this committee. The forces required are to be drawn from the member states as a result of particular agreements between those states and the Security Council.

4. **The Economic and Social Council.**—This body consists of eighteen members, each elected for a period of three years. Its main functions are to make, or initiate, studies and reports, and to make recommendations to the General Assembly or to members of the United Nations, upon international, economic, social, cultural, educational, health and related matters. It may make recommendations for the purpose of promoting respect for, and observance of, human rights and fundamental freedoms for all.

The present members of the Economic and Social Council are: United Kingdom, U.S.S.R., Brazil, Denmark, Australia, Poland (retiring at the end of 1950), Belgium, China, Chile, France, India, Peru (retiring at the end of 1951), Mexico, Iran, United States of America, Pakistan, Canada, Czechoslovakia (retiring at the end of 1952).

5. **The Trusteeship Council.**—The Charter declares the political, social, cultural and economic advancement of the non self-governing territories to be a sacred trust. A Trusteeship Council has been set up composed of those members of the United Nations who are administering trust territories and an equal number of members who are not administering trust territories (including any permanent members of the Security Council who are not administering trust territories). Territories which may be placed under trusteeship in accord with individual trusteeship agreements are those previously held under mandate, those detached from enemy states as a result of the second World War and those dependent territories placed under the system by the states responsible for their administration. Australia is automatically a member of the Trusteeship Council, as an administering Power. The present members of the Trusteeship Council are: Australia, Belgium, France, New Zealand, United Kingdom and the United States of America (administering States), and China, the Dominican Republic, Philippines, U.S.S.R., Argentina and Iraq (non-administering States). China and the U.S.S.R. are eligible for permanent membership of the Trusteeship Council by virtue of their permanent membership of the Security Council.

The Council has among its duties the consideration of annual reports submitted by the trustee state, the carrying out of periodic inspections by agreement with it, and the formulation of questionnaires on the welfare and advancement of the dependent peoples.

6. **The International Court of Justice.**—This consists of fifteen judges, no two of whom may be nationals of the same state. Its jurisdiction comprises all cases which the parties refer to it, and all matters especially provided for in the Charter or in treaties and conventions in force. Provision exists in the Statute of the Court whereby States parties to the Statute may accept the jurisdiction of the Court as compulsory, either conditionally, or unconditionally in certain international disputes.

The judges first elected are:—Nine year term: Professor Jules Basdevant (France), Dr. J. G. Guerrero (El Salvador), Sir Arnold McNair (United Kingdom), Dr. Alejandro Alvarez (Chile), and Dr. J. P. de Barros Azevedo (Brazil); Six year term: Dr. Charles de Visser (Belgium), Professor S. B. Krylov (Union of Soviet Socialist Republics), Lic. Isidro Fabela Alfaro (Mexico), the Hon. Green H. Hackworth (United States of America), and Dr. Juris. H. Klaestad (Norway); Three year term: Dr. Hsu Mo (China), H. E. Abdel Hamid Badawi Pasha (Egypt), Mr. J. E. Read, K.C. (Canada), Dr. Milovan Zoricic (Yugoslavia), and M. Bohdan Winiarski (Poland). At the Third Annual Session of the Assembly the five retiring judges were re-elected.

7. **The Secretariat.**—The Secretary-General is the head of the Secretariat of the organization. He is appointed by the General Assembly upon the recommendation of the Security Council, and he appoints his staff in accordance with the rules approved by the General Assembly. M. Trygve Lie (Norway) was appointed first Secretary-General.

8. **Specialized Agencies.**—In addition to these organs of the United Nations there are thirteen specialized agencies which co-operate closely with the United Nations in many fields on economic and social questions.

Those already in operation are : The International Labour Organization ; Food and Agricultural Organization ; United Nations Educational, Scientific and Cultural Organization ; International Civil Aviation Organization ; International Bank for Reconstruction and Development ; International Monetary Fund ; Universal Postal Union ; World Health Organization ; International Telecommunications Union ; International Refugee Organization.

To enable co-ordination of the work of the specialized agencies, arrangements have been made for them to submit reports on their activities and budgets to the United Nations where they are discussed by the Economic and Social Council and the General Assembly.

§ 25. Diplomatic and other Representatives Overseas and in Australia.

1. **General.**—The following statements show particulars of the various diplomatic and other representatives overseas and in Australia in September, 1950. Full details of British and foreign representation in Australia—diplomatic and consular—and of permanent Australian missions overseas may be obtained from publications issued by the Department of External Affairs, Canberra.

2. Australian Representation Overseas.—

AUSTRALIAN DIPLOMATIC AND OTHER REPRESENTATIVES OVERSEAS.

His Majesty's Ambassador Extraordinary and Plenipotentiary to—

China, Nanking—

Vacant.

France, Paris—

Sir Keith Officer, O.B.E., M.C.

Ireland, Dublin—

Vacant.

Counsellor, Dr. W. A. Wynes (Chargé d'Affaires *ad interim*).

Netherlands, The Hague—

A. T. Stirling, O.B.E. (Designate).

Union of Soviet Socialist Republics, Moscow—

Vacant.

First Secretary, F. J. Blakeney (Chargé d'Affaires *ad interim*).

United States of America, Washington, D.C.—

The Hon. N. J. O. Makin.

United States of Indonesia, Djakarta—

J. D. L. Hood.

His Majesty's Australian Envoy Extraordinary and Minister Plenipotentiary to—

Brazil, Rio de Janeiro—

Vacant.

First Secretary, R. P. Throssell (Chargé d'Affaires *ad interim*).

Egypt, Cairo—

C. Massey.

Israel, Tel Aviv—

O. C. W. Fuhrman, O.B.E.

Italy, Rome—

C. V. Kellway.

Philippines, Manila—

Rear-Admiral G. D. Moore, C.B.E.

High Commissioners for Australia in—

Canada, Ottawa—

The Rt. Hon. F. M. Forde.

Ceylon, Colombo—

Vacant.

Official Secretary, A. H. Borthwick.

India, New Delhi—

H. R. Gollan, D.S.O., M.C.

New Zealand, Wellington—

A. R. Cutler, V.C.

Pakistan, Karachi—

J. E. Oldham.

Union of South Africa, Pretoria—

Vacant.

Official Secretary, M. H. Marshall.

United Kingdom of Great Britain and Northern Ireland, London—

The Hon. E. J. Harrison (Resident Minister).

Australian Military Mission in—

Germany, Berlin—

Head, N. St. C. Deschamps (Acting).

Australian Mission—

Germany, Bonn—

Head, N. St. C. Deschamps.

Japan, Tokyo—

Head, Lieut-Colonel W. R. Hodgson, O.B.E.

United Nations, New York—

Minister, vacant.

Counsellor, K. C. O. Shann.

United Nations, Geneva—

Counsellor, B. C. Ballard.

Australian Commissioner for—

Malaya, Singapore—

Vacant.

Counsellor, L. R. McIntyre.

Consuls-General—

China, Shanghai—

Vacant.

Thailand, Bangkok—

A. H. Loomes.

United States of America, New York—

Lieut-General E. K. Smart, D.S.O., M.C. (Acting).

United States of America, San Francisco—

N. N. Frewin (Acting).

Consuls—

New Caledonia, Noumea—

L. J. Lawrey (Acting).

Portuguese Timor, Dili—

Vacant.

Trade Commissioners for the Commonwealth of Australia—

Canada—

C. J. Carne, Ottawa.

F. R. Gullick, Vancouver.

Ceylon—

Major-General J. J. Murray, D.S.O., M.C., V.D., Colombo.

China—

Brigadier H. Wrigley, C.B.E., M.C., Hong Kong.

Egypt and Middle East—

C. L. Steele, Cairo.

France—

H. Sullivan, Commercial Counsellor, Paris.

India—

S. D. Shubart, Bombay.

A. N. Wootten, Calcutta.

Japan—

H. C. Menzies, Commercial Counsellor, Tokyo.

Malaya—

J. Payne, Singapore.

New Zealand—

R. Hazzard, Wellington.

Pakistan—

H. W. Goodger, Karachi.

Union of South Africa—

G. R. B. Patterson, Johannesburg.

United Kingdom of Great Britain and Northern Ireland—

C. E. Critchley, M.B.E., London.

United States of America—

Trade Commissioners—

R. R. Ellen, New York.

S. F. Lynch, San Francisco.

Commercial Counsellor—

J. U. Garside, Washington, D.C.

3. Oversea Representation in Australia.—Consular representatives are not included in the following statement. Particulars of these are contained in a publication "Consular Representatives and Trade Commissioners in Australia", issued by the Department of External Affairs, Canberra. There are more than 150 such representatives in Australia, and 35 countries are represented.

DIPLOMATIC REPRESENTATIVES IN AUSTRALIA.

Belgium—Envoy Extraordinary and Minister Plenipotentiary—

His Excellency Monsieur Felix F. A. Jansen.

Brazil—Envoy Extraordinary and Minister Plenipotentiary—

His Excellency Senhor José Cochrane de Alencar, O.B.E.

Canada—High Commissioner—

His Excellency Major-General The Rt. Hon. L. R. La Flèche, D.S.O.

Ceylon—High Commissioner—

His Excellency Mr. J. Aubrey Martensz.

China—Ambassador Extraordinary and Plenipotentiary—

His Excellency Dr. Kan Nai-kuang.

Denmark—Envoy Extraordinary and Minister Plenipotentiary—Vacant.Chargé d'Affaires *ad interim*, Mr. F. H. Hergel.

DIPLOMATIC REPRESENTATIVES IN AUSTRALIA—continued.

- Finland*—Envoy Extraordinary and Minister Plenipotentiary—Vacant.
Chargé d’Affaires *ad interim*, Monsieur P. I. Simelius.
- France*—Ambassador Extraordinary and Plenipotentiary—
His Excellency Monsieur Gabriel Padovani.
- India*—High Commissioner—
His Excellency Maharaj Shri Duleepsinhji.
- Ireland*—Representative of Ireland in Australia—
His Excellency Dr. the Hon. T. J. Kiernan (personal rank of Minister).
- Israel*—Envoy Extraordinary and Minister Plenipotentiary—
His Excellency Mr. Joseph Isaac Linton.
- Italy*—Envoy Extraordinary and Minister Plenipotentiary—
His Excellency Don Giulio del Balzo.
- Malta*—Commissioner—
Captain Henry C. Curmi, O.B.E.
- Netherlands*—Envoy Extraordinary and Minister Plenipotentiary—Vacant.
Chargé d’Affaires *ad interim*, Mr. A. H. Hasselman.
- New Zealand*—High Commissioner—
His Excellency Mr. G. E. L. Alderton.
- Pakistan*—High Commissioner—
His Excellency Mr. Yusuf Abdoola Haroon.
- Philippines*—Envoy Extraordinary and Minister Plenipotentiary—
His Excellency Dr. Roberto Regala.
- Sweden*—Envoy Extraordinary and Minister Plenipotentiary—Vacant.
Chargé d’Affaires *ad interim*, Mr. B. H. Alander.
- Union of South Africa*—High Commissioner—
His Excellency Dr. P. R. Viljoen.
- Union of Soviet Socialist Republics*—Ambassador Extraordinary and Plenipotentiary—
His Excellency Mr. N. M. Lifanov.
- United Kingdom of Great Britain and Northern Ireland*—High Commissioner—
His Excellency the Rt. Hon. E. J. Williams.
- United States of America*—Ambassador Extraordinary and Plenipotentiary—
His Excellency Mr. Pete Jarman.
- United States of Indonesia*—Ambassador Extraordinary and Plenipotentiary—
His Excellency Dr. Oetoyo.

TRADE COMMISSIONERS OF OVERSEA GOVERNMENTS IN AUSTRALIA.

- Canada*—
Senior Canadian Government Trade Commissioner, Sydney—
C. M. Croft.
Canadian Government Trade Commissioner, Melbourne—
F. W. Frazer.
- India*—
Indian Government Trade Commissioner, Sydney—
A. Baksi.
- New Zealand*—
Senior New Zealand Government Trade Commissioner, Sydney—
W. Taylor.
New Zealand Government Trade Commissioner, Melbourne—
B. R. Rae, M.B.E.

TRADE COMMISSIONERS OF OVERSEA GOVERNMENTS IN AUSTRALIA
*continued.**Pakistan—*

Trade Commissioner, Sydney—

K. H. Rahman.

United Kingdom of Great Britain and Northern Ireland—

His Majesty's Senior Trade Commissioner, Canberra—

J. B. Greaves, C.M.G., O.B.E.

His Majesty's Trade Commissioners, Sydney—

J. R. Adams.

A. Hartland.

J. D. Leithead.

His Majesty's Trade Commissioners, Melbourne—

H. F. Gurney, O.B.E.

W. G. Lamarque.

E. J. E. Newbold.

His Majesty's Trade Commissioner, Brisbane—

P. Ingleson, C.M.G., M.B.E., M.C.

United States of Indonesia—

Trade Commissioner, Melbourne—

J. Van der Noordaa.

CHAPTER XXIX.

STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

§ 1. General.

Development of Australian Statistics.—An outline of the history and development of statistics in Australia is published in Official Year Book No. 19 (*see* p. 988) and previous issues, particular reference being made to the Crown Colony Blue Books, Statistical Registers, Prominent State Statisticians, Statistical Conferences, the Foundation of the Federal Bureau, the Uniformity of Statistical Control and the organization for the collection, tabulation, etc., of statistical data as between the State and Commonwealth Statistical Bureaux, and State and Commonwealth Government Departments.

§ 2. Statistical Publications of Australia.

1. General.—The official statistical publications of Australia may be divided bibliographically into two main divisions, namely :—(1) Commonwealth publications dealing both individually and collectively with the several States of Australia; and (2) State publications dealing with individual States only. Besides these, there are many other circulars, press notices, etc., issued regularly which, though not wholly statistical, necessarily contain a considerable amount of statistical information.

2. Commonwealth Publications.—Commonwealth publications may be grouped under two heads, namely :—(i) Publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers.

(i) *Publications issued by the Commonwealth Statistician.* The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration to December, 1950 :—

Australian Life Tables, 1901-1910. Australian Joint Life Tables, 1901-1910.

Australian Life Tables, 1920-1922.

Australian Life Tables, 1932-1934. Australian Joint Life Tables, 1932-1934.

Australian Life Tables, 1946-1948.

Australian Primary Industries.—Report prepared for the Empire Producers Conference, Sydney, March, 1938.

Census (1911) Results.—Bulletins. Vols. I. (Statistician's Report), II., and III., with Appendix "Mathematical Theory of Population."

Census (1921) Results.—Bulletins, Nos. 1 to 26. Parts I. to XVI., forming Vol. I., and Parts XVII. to XXIX., forming, with the Statistician's Report, Vol. II.

NOTE.—Part XXVII., Life Tables.

Census (1933) Results.—Bulletins, Nos. 1 to 25. Parts I. to XIV., forming Vol. I., Parts XV. to XXVIII., forming Vol. II., and Parts XXIX. to XXXVII., forming, with Statistician's Report and Australian Life Tables 1932-34, Vol. III.

Census (1947) Results.—Bulletins, Nos. 1 to 24. Parts I. to VIII. For details *see* back page of this volume.

Census of Retail Establishments (1947-48) Results.—Bulletins, Nos. 1 to 7.

Crop Summary.—Annually, 1943-44 to 1948-49.

Dairying Summary.—Monthly; first issue, September, 1937.

Finance.—Bulletins, 1907 to 1916-17 annually; 1917-18 and 1918-19 (one vol.); 1919-20 and 1920-21 (one vol.); 1922-23 to 1948-49 annually.

Food Production and the Consumption of Foodstuffs and Nutrients in Australia.—Half-yearly, 1946-47 to 1947-48; annually, 1948-49.

Frust Summary.—Annually, 1944-45 to 1948-49.

Labour and Industrial Statistics.—Memoranda and Reports, various, to 1913.

Labour Report.—Annually, 1913 to 1948.

Live-stock Summary.—Annually, 1943 to 1949.

Local Government in Australia.—July, 1919.

Manufacturing Industries.—Bulletins on Individual Industries, annually, 1936–37 to 1939–40, 1940–41 (issue incomplete), and 1944–45 to 1948–49.

Monthly Review of Business Statistics.—First issue, October, 1937.

Occupation Survey (1945) Results.—Detailed tables.

Official Year Book of the Commonwealth of Australia.—Annually, 1907 to present issue (No. 38).

Oversea Trade.—Bulletins, annually, 1906 to 1948–49.

Pocket Compendium of Australian Statistics (formerly *Statistical Digest*).—1913, 1914, 1916, and 1918 to 1949 annually.

Population and Vital Statistics.—Bulletins and Reports, various, 1906–1910. *Demography*, 1911 to 1948 annually.

Production.—Bulletin, annually, 1906 to 1947–48. From 1936–37 issued in two parts: Part I. Secondary Industries; Part II. Primary Industries and Total Recorded Production.

Professional Papers.—Various. A full list appears in *Official Year Book* No. 13, p. 3.

Quarterly Summary of Australian Statistics.—First issue, No. 70, December, 1917, replacing *Monthly Summary of Australian Statistics* (Bulletins Nos. 1 to 69).

Social Insurance.—Report to the Hon. the Minister of Trade and Customs, 1910.

Social Statistics.—Bulletins, 1907 to 1915 annually, and 1918.

Superannuation for the Commonwealth Public Service.—Report to the Hon. the Minister for Home Affairs, 1910.

Transport and Communication.—Bulletins, 1906, 1908 to 1916 annually, 1919 to 1930 annually, and 1932 to 1947–48 annually.

Vegetable Summary.—Annually, 1942–43 to 1948–49.

Wages and Prices.—January, 1932.

Wealth.—The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.

Wheat Summary.—Periodically; first issue, July, 1936.

(ii) *Commonwealth Parliamentary and Departmental Reports and Papers*. Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth appear in the *Official Year Books* up to No. 15.

3. *State Publications*.—The chief statistical publications of each State are set out hereunder. Limits of space preclude a further enumeration of the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local government bodies, etc., in each State.

(a) New South Wales—Statistical Register (annual); *Official Year Book of New South Wales* (annual); *Pocket Year Book* (annual); *Statistical Bulletin* (monthly to December, 1919, quarterly to June, 1943, then discontinued to September, 1948); *Monthly Summary of Business Statistics*.

(b) Victoria—Statistical Register (annual to 1916, then discontinued); *Victorian Year Book* (annual); *Statistical Abstracts* (quarterly to 1917, then discontinued to December, 1946).

(c) Queensland—Statistical Register (annual); *Official Year Book*, 1901; A.B.C. of Queensland Statistics (annual to 1936, then discontinued); the Queensland Year Book (annual 1937 to 1941, then discontinued to 1945); Queensland Pocket Year Book (annual).

(d) South Australia—Statistical Register (annual); *Official Year Book*, 1912 and 1913; *Statesman's Pocket Year Book* (annual); *Quarterly Summary of Statistics*.

(e) Western Australia—Statistical Register (annual); *Statistical Abstracts* (quarterly, previously issued monthly to July, 1917); *Pocket Year Book of Western Australia* (annual).

(f) Tasmania—Statistical Register (annual); *Pocket Year Book* (annual); *Monthly Review of Business Statistics*.

§ 3. Select List of Representative Works Dealing with Australia.

(Compiled by the Librarian of the Commonwealth National Library.)

Under each heading a list is first given of the principal standard books which are still in print. This is followed by lists of selected books published during the current period and of official publications, excluding annual reports, of the same period. In the present list the period covered is 1st January, 1948 to 31st December, 1949. A few books which, though published earlier, were received after the compilation of the last issue are also included.

Technical works on Law, Medicine and the pure sciences are excluded.

Where known, the retail price in the country of publication is given, but this is subject to fluctuation.

A copy of each of the works mentioned is preserved in the Library and access thereto may be had by any Commonwealth official or other authorized person.

The Library also publishes an annual catalogue of Australian publications, official papers and books on Australia published overseas, obtainable from the Government Printer at a price of 2s. ; Australian public affairs information service, a monthly subject index to current literature, available gratis from the Library ; and Books published in Australia, a monthly list of books supplied under copyright, also available gratis from the Library.

General and Descriptive.

- AUSTRALIAN ENCYCLOPEDIA, THE: *editors*, A. W. Jose, H. J. Carter and T. G. Tucker: 3rd ed. 2 v. (Angus & Robertson, 55s.) Sydney, 1926-27 (o.p., but new ed. in preparation).
 AUSTRALIAN NATIONAL PUBLICITY ASSOCIATION. Australia: official handbook. (The Association, 3s. 6d.) Melbourne, 1947.
 GRATTAN, C. H. *Introducing Australia*: 2nd Australian ed. (Angus & Robertson, 8s.) Sydney, 1949.
 GRATTAN, C. H., *ed.* Australia: [chapters by K. H. Bailey and others.] (California University Press, \$5.00.) Berkeley, 1947.
 MADIGAN, C. T. *Central Australia*. 2nd ed. (Oxford University Press, 15s.) Melbourne, 1944.
 OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA: Nos. 1 to date. (Government Printer, 5s. *per issue*.) Canberra, 1908, to date.
 TAYLOR, T. G. *Australia: a study of warm environments and their effect on British settlement*: 5th ed. (Methuen, 21s.) London, 1949.
 WALKABOUT: *Australia and the South Seas*. (Australian National Publicity Association, 15s. *per annum*.) Melbourne, 1934 to date.
 WOOD, T. *Cobbers: a personal record of a journey from Essex, in England, to Australia*. (Oxford University Press, 6s. 6d.) Melbourne, 1943.

RECENT PUBLICATIONS.

- CANBERRA, national capital: a prophecy is fulfilled. (Gotham, 5s.) Sydney, 1949.
 CATO, J. G. Melbourne: pictured by Jack Cato. (Georgian House, 30s.) Melbourne, 1949.
 CLUNE, F. P. Land of my birth: epics of Australian adventure. (Invincible, 12s. 6d.) Sydney, 1949.
 FAIRFAX, J. F. Run o' waters: tales of Australian country, people and places: the hisp of rivers and the song of birds: drawings by Cedric Emanuel. (Sands, 13s. 6d.) Sydney, 1948.
 FARWELL, G. M. *Traveller's tracks*. (Melbourne University Press, 12s. 6d.) Melbourne, 1949.
 FARWELL, G. M. and JOHNSTON, F. H. *eds.* This land of ours: Australia. (Angus & Robertson, 25s.) Sydney, 1949.
 GROOM, Arthur. One mountain after another. (Angus & Robertson, 15s.) Sydney, 1949.
 HART, R. Raven-. Canoe in Australia. (Georgian House, 15s.) Melbourne, 1948.
 HURLEY, J. F. Sydney: a camera study. (Angus & Robertson, 30s.) Sydney, 1948.
 HURLEY, P. J. Red cedar: the story of the North Coast. (Dymock's, 16s. 6d.) Sydney, 1948.
 HUTTON, G. W. and KNOX, P. E. Searchlight on Australia. (Chesidre, 2s. 6d.) Melbourne, 1949.
 RATCLIFFE, F. N. Flying fox and drifting sand: the adventures of a biologist in Australia: introd. by Julian Huxley. (Angus & Robertson, 12s. 6d.) Sydney, 1947. First published in Great Britain and U.S.A. in 1938.
 RAWSON, G. Australia. (Chatto & Windus, 19s. 6d.) London, 1948.
 RODERICK, Colin, *ed.* Wanderers in Australia: a book of travels. (Angus & Robertson, 15s.) Sydney, 1949.
 TURNBULL, C. The charm of Hobart: illust. by Kenneth Jack: descriptive paragraphs by Wilfred H. Hudspeth. (Ure Smith, 6s. 6d.) Sydney, 1949.
 The Melbourne book: drawings by Kenneth Jack. (Ure Smith, 6s. 6d.) Sydney, 1948.
 WALKER, D. We went to Australia. (Chapman & Hall, 12s. 6d.) London, 1949.

Territories Outside Australia.

- AUSTRALIA—Committee . . . [on] the possibility of establishing a combined administration of the territories of Papua and New Guinea, etc. Report. (Government Printer, 3s.) Canberra, 1939.
- AUSTRALIA—External Affairs, Department of. Handbook and index to accompany a map of Antarctica produced by the Department of the Interior, 1939: by E. P. Bayliss and J. S. Cumpston. (Department of External Affairs, 2s. 6d.) Canberra, 1940.
- FORTUNE, R. F. Manus religion. (Oxford University Press, 13s. 6d.) Oxford, 1936.
- MALINOWSKI, E. Coral gardens and their magic: a study of the methods of tilling the soil and of agricultural rites in the Trobriand Islands: 2 v. (Allen & Unwin, 42s.) London, 1935.
- MEAD, M. From the South Seas: studies of adolescence and sex in primitive societies. 3 v. in 1. (Morrow, \$4.) New York, 1939.
- OFFICIAL HANDBOOK OF NEW GUINEA. (External Territories Department, 7s. 6d.) Canberra, 1937. (Re-issued 1943 with supplements.)
- REED, S. W. The making of modern New Guinea: with special reference to culture contact in the Mandated Territory. (American Philosophical Society and Institute of Pacific Relations, \$3.) Philadelphia, 1943.
- WHITING, J. W. M. Becoming a Kwoma: teaching and learning in a New Guinea tribe. (Yale University Press, \$2.75.) New Haven, 1941.
- WILLIAMS, F. E. Orokaiva magic. (Oxford University Press, 12s. 6d.) Oxford, 1928. Orokaiva society. (Oxford University Press, 25s.) Oxford, 1930.
- Papua of the Trans-Fly. (Oxford University Press, 30s.) Oxford, 1936.
- See also the annual reports of the Administrators of the various Territories, the reports to the General Assembly of the United Nations on trusteeship territories, the anthropological reports of the Governments of Papua and New Guinea, and material appearing in *Oceania*.

RECENT PUBLICATIONS.

- CRANSWICK, G. H., *Bishop of Gippsland* and SHEVILL, I. W. A. A new deal for Papua. (Cheshire 5s.) Melbourne, 1949.
- DUPEYRAT, Rev. A. Papuan conquest. (Araluen, 5s. 6d.) Melbourne, 1948.
- HART, R. R. The happy isles. (Georgian House, 18s.) Melbourne, 1949.
- HURLEY, J. F. Shackleton's argonauts: a saga of the Antarctic ice-packs. (Angus & Robertson, 12s. 6d.) Sydney, 1948.
- MAIR, Lucy P. Australia in New Guinea: introd. by Lord Hailly. (Christophers, 18s.) London, 1948.
- MURRAY, J. K. Provisional administration of the territory of Papua-New Guinea: its policy and its problems. (University of Queensland, 5s.) Brisbane, 1949. (John Murtagh Macrossan memorial lectures for 1949).
- NICHOL, J. R. Stepping stones to the South Pole. (Angus & Robertson, 15s.) Sydney, 1948.
- SCHOLES, Arthur. Fourteen men: story of the Australian Antarctic expedition to Heard Island. (Cheshire, 15s.) Melbourne, 1949.
- WEETMAN, C. All about Antarctica. (Author, 4s.) Melbourne, 1948.

History.

- CAMBRIDGE HISTORY OF THE BRITISH EMPIRE, v. 7, pt. 1: Australia. (Cambridge University Press, 35s.) Cambridge, 1933.
- FITZPATRICK, B. C. The Australian people, 1788-1945. (Melbourne University Press, 12s. 6d.) Melbourne, 1946.
- British imperialism and Australia, 1783-1833: an economic history of Australasia. (Allen & Unwin, 18s.) London, 1939. (New ed. in preparation.)
- British Empire in Australia: an economic history 1834-1939. 2nd ed. (Melbourne University Press, 17s. 6d.) Melbourne, 1949.
- HANCOCK, William Keith. Australia. (Australasian Publishing Co., 1s. 11d.) Sydney, 1945. (First published in Great Britain in 1930.)
- HISTORICAL RECORDS OF AUSTRALIA: ed. J. F. Watson (in progress). (Commonwealth Parliament Library Committee, Canberra, 12s. 6d. per v.) Sydney, 1914 to date. (34 v. have so far appeared. Publication has been suspended since 1925.)
- HISTORICAL STUDIES: Australia and New Zealand. (Melbourne University Press, 10s. per annum.) Melbourne, 1940 to date.
- SHANN, E. O. G. An economic history of Australia. (Georgian House, 18s.) Melbourne, 1948.
- SHAW, A. G. L. Economic development of Australia: rev. ed. (Longmans, 7s.) London, 1946.

RECENT PUBLICATIONS.

- BARNARD, M. F. Australian outline: a brief history of Australia: 2nd ed. (Ore Smith, 6s. 6d.) Sydney, 1949.
- BARDON, R. The century history of the Presbyterian Church of Queensland. (General Assembly of the Presbyterian Church of Queensland, 7s. 6d.) Brisbane, 1949.
- BRIDGES, R. That yesterday was home. (Asian Pub. Co., 12s. 6d.) Sydney, 1948.
- COLLIS, E. H. Lost years: a backward glance at Australian life and manners. (Angus & Robertson, 8s. 6d.) Sydney, 1948.
- FARWELL, G. M. Down Argent Street: the story of Broken Hill. (F. H. Johnston, 35s.) Sydney, 1948.
- LA NAUZE, J. A. Political economy in Australia: historical studies. (Melbourne University Press, 9s. 6d.) Melbourne, 1949.
- RAWSON, G. Desert journeys: an account of the arduous exploration of the interior of the continent of Australia by rival expeditions in 1873-4. (Asian Pub. Co., 12s. 6d.) Sydney, 1948.
- ROWLAND, E. C. A century of the English Church in New South Wales: foreword by the Archbishop of Sydney, the Most Rev. H. K. Mowll. (Angus & Robertson, 9s. 6d.) Sydney, 1948.
- UREN, M. J. L. Glimp of gold: a story of the gold-fields of Western Australia and the men who found them . . . (Robertson & Mullens, 19s. 6d.) Melbourne, 1948.
- Land looking west: the story of Governor James Stirling in Western Australia. (Oxford University Press, 21s.) London, 1948.
- WARD, J. M. British policy in the South Pacific (1786-1893): a study in British policy towards the South Pacific Islands prior to the establishment of governments by the great powers. (Asian Pub. Co., 22s. 6d.) Sydney, 1948.
- WOLLASTON, Rev. J. R. Wollaston's Picton journal (1841-1844) being Vol. 1 of the journals and diaries (1841-1856) of Rev. John Ramsden Wollaston, M.A., Archdeacon of Western Australia, 1849-1856. (Pitman, 10s.) Perth, 1949.

Military and Naval History.

- AUSTRALIA—Army—Public relations directorate.** The Australian army at war: an official record of service in two hemispheres, 1939–1945. (The Directorate.) Melbourne, 1947.
- BEAN, C. E. W.** Anzac to Amiens: a shorter history of the Australian fighting services in the first world war. (Australian War Memorial, 25s.) Canberra, 1946.
- OFFICIAL HISTORY OF AUSTRALIA IN THE WAR OF 1914–18:** *editor*, C. E. W. Bean. 12 v. (Australian War Memorial, 21s. *per* v. V. 8, 10, 11: 18s.) Canberra, 1921–42.
- OFFICIAL HISTORY OF THE AUSTRALIAN ARMY MEDICAL SERVICES IN THE WAR OF 1914–18:** *editor*, Col. A. G. Butler. 3 v. (Australian War Memorial, 21s. *per* v.) Canberra, 1930–43.

RECENT PUBLICATIONS.

Official—

- BEAN, C. E. W.** Gallipoli mission. (Australian War Memorial, 25s.) Canberra, 1948. Describes the work of an Australian military mission which returned to the Gallipoli Peninsula in 1919 to establish facts relating to the military action which took place there in 1915.

Other—

- CHATAWAY, T. P.** History of the 15th Battalion, Australian Imperial Forces: war 1914–1918: rev. and ed. by Lt.-Col. Paul Goldenstadt. (Brooks, 17s. 6d.) Brisbane, 1948.
- ELDRIDGE, R. B.** A history of the Royal Australian Naval College. (Georgian House, 42s.) Melbourne, 1949.
- HARTLEY, Rev. F. J.** Sanananda interlude: the 7th Australian Division Cavalry Regiment. (Book Depot, 6s. 6d.) Melbourne, 1949.
- MACANDIE, G. L.** The genesis of the Royal Australian Navy: a compilation. (Cheshire, distributors, 25s.) Melbourne, 1949.
- MCGUIRE, Frances M.** The Royal Australian Navy: its origin, development and organization. (Oxford University Press, 16s.) Melbourne, 1948.
- RUSSELL, W. B.** The Second Fourteenth Battalion: a history of an Australian infantry battalion in the second world war. (Angus & Robertson, 18s. 6d.) Sydney, 1948.
- WALKER, G. Boss.** Desert sand and jungle green: a pictorial history of the 2/43rd Australian Infantry Battalion (Ninth Division) in the second world war, 1939–1945. (Oldham, Beddome & Meredith, 20s.) Hobart, 1948.
- WYNWARD, Noel.** Winning hazard. (Low, 10s. 6d.) London, 1947. The history of an Allied attack on shipping in Singapore Harbour in 1943.

Biography.

- BIOGRAPHICAL HANDBOOK AND RECORD OF ELECTIONS FOR THE PARLIAMENT OF THE COMMONWEALTH.** (Commonwealth Parliament Library Committee, 10s. 6d.) Canberra, 1945.
(A new issue is produced for each Federal Parliament.)
- SERLE, Percival.** Dictionary of Australian Biography. (Angus & Robertson, 105s.) Sydney, 1949.
- WHO'S WHO IN AUSTRALIA** 13th ed. by A. H. Chisholm. (Herald Press, 31s. 6d.) Melbourne, 1947.

RECENT PUBLICATIONS.

- BROWN, M. M.** Australian son: the story of Ned Kelly: including the Jerilderie letter, a recently discovered statement . . . by Ned Kelly. (Georgian House, 12s. 6d.) Melbourne, 1948. (Australiana Society publication.)
- DWYER, James F.** Leg-irons on wings. (Georgian House, 15s.) Melbourne, 1949.
- ELLIS, M. H.** Francis Greenway: his life and times. (Shepherd Press, 120s.) Sydney, 1949.
- FITZPATRICK, K. E. Mrs.** Sir John Franklin in Tasmania, 1837–1843. (Melbourne University Press, 25s.) Melbourne, 1949.
- LAWRENCE, Marjorie F.** Interrupted melody: an autobiography. (Invincible, 12s. 6d.) Sydney, 1949.
- LETT, Lewis.** Sir Hubert Murray of Papua. (Collins, 21s.) Sydney, 1949.
- LOCK, A. C. C.** Tropics and topics. (Invincible, 15s.) Sydney, 1949.
- MCLACHLAN, A. J.** McLachlan an f.a.q. Australian. (Lotlidan, 20s.) Melbourne, 1948.
- MURDOCH, Nina.** Portrait in youth of Sir John Longstaff. (1861–1941). (Angus & Robertson, 15s.) Sydney, 1948.
- MURPHY, F.** Daniel Mannix. Archbishop of Melbourne. (Advocate Press, 15s.) Melbourne, 1948.
- PALMER, V.** National portraits: 2nd ed. (Melbourne University Press, 12s. 6d.) Melbourne, 1948.
- REYNOLDS, J.** Edmund Barton: foreword by the Rt. Hon. R. G. Menzies. (Angus & Robertson, 15s.) Sydney, 1948.
- RODERICK, C.** In mortal bondage: the strange life of Rosa Præd. (Angus & Robertson, 12s. 6d.) Sydney, 1948.
- RUSSELL, A.** William James Farrer: a biography. (Cheshire, 15s.) Melbourne, 1949 [1948].
- SELLE, F. A.** Donald of China. (Invincible, 12s. 6d.) Sydney, 1948.
- TEUMBLE, H. C.** Blades of grass. (Georgian House, 21s.) Melbourne, 1948. (Australiana Society publication.)
- WILLIS, M.** By their fruits: a life of Ferdinand von Müller, botanist and explorer. (Angus & Robertson, 15s.) Sydney, 1949.

Constitution and Administration.*

- AUSTRALIA—*Laws, Statutes, etc.*** The acts of the Parliament of the Commonwealth of Australia passed from 1901 to 1935 and in force on 1st January, 1936; to which is prefixed the Commonwealth of Australia constitution act. 4 v. and supplements. (Government Printer, 26 6s., supplements 10s. *per annum.*) Canberra, 1936.
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 BROCKMAN, Henrietta Drake. Sydney or the bush: short stories. (Angus & Robertson, 9s. 6d.) Sydney, 1948.
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DIARY OF PRINCIPAL ECONOMIC EVENTS, 1946 to 1949.

The principal economic events for the years 1931 to 1938 were shown on pp. 968 to 977 of the Official Year Book No. 33, those for the years 1939 to 1944 on pp. 1129 to 1141 of the Official Year Book No. 36 and those for the year 1945 were included in the range of years—1945 to 1948—covered in the previous Official Year Book (No. 37).

1946.

The year 1946 was one of reconversion from war to peace. Demobilization continued throughout the year, about 316,000 men and 27,000 women being discharged. Employment (excluding rural and household domestic) increased by 276,000 during the year (259,000 males and 17,000 females). Unemployment remained negligible throughout the year. At the end of the year there was some increase in Victoria following the commencement on 16th October of the metal trades industrial dispute which lasted till May, 1947.

Production of wool and meat during 1945-46 was below the previous year, but the wheat harvest was considerably greater. Unfavourable seasonal conditions during the year caused a substantial fall in the 1946-47 wheat harvest in New South Wales and Queensland, with a consequent fall in total Australian production, but 1946-47 production of meat and wool improved. Work on post-war housing programmes was increasing and during 1946 about 25,000 houses were completed.

Export prices were higher than in 1945 and rose rapidly towards the end of the year, and the total value of exports was considerably higher than in the previous year. Import prices increased about 13 per cent. Retail prices and the basic wage remained steady throughout the year until the 7s. increase in the basic wage granted in December. Average factory earnings increased slowly during the year and in the December quarter were about 4 per cent. above the 1945 December quarter.

8th January.—Commonwealth Government asked Governments of States to confer on five years' plan for stabilization of wheat price at 5s. 2d. a bushel, f.o.b. Australia. (*see* 16th April.)

10th January.—First meeting of General Assembly of United Nations Organization opened in London. Minister for Navy (Mr. N. J. O. Makin) led the Australian delegation.

26th January.—Arrangements made between United Kingdom and Australia, New Zealand, India and South Africa to operate air trunk routes in various parts of the world.

7th February.—In response to a request from Council of UNRRA, Federal Cabinet decided to make a further contribution of £12,000,000 if necessary.

11th February.—Commonwealth Government decision to provide substantial funds for rehabilitation of Australian mining industry and for development of mining projects.

14th February.—Mr. L. G. Melville to attend, as an observer, the first meeting in America of the Board of Governors to establish International Monetary Fund and International Bank for Reconstruction and Development.

25th February.—Commonwealth Government plans for increased annual immigration.

1st March.—Cessation of man-power controls over employment of male labour.

5th March.—Under agreement between British and Australian Governments, free passages to be granted to British service personnel and dependants, and assisted passages to British civilians and dependants, who wish to emigrate to Australia.

22nd March.—Tasmanian Legislative Council rejected a bill to grant price control to Commonwealth for three years.

26th March.—A.C.T.U. lodged with Arbitration Court applications on behalf of 47 unions for right to intervene in claim by Printing Industry Employees' Union for a 40-hour week.

28th March.—Bills introduced by Attorney-General to amend the Constitution regarding—(1) Social Services, (2) Marketing of Primary Products, (3) Industrial Employment. (Subsequently passed by both Houses and submitted to electors. *See* 28th September.)

29th March.—Approval by Federal Cabinet of draft for submission to the United States of America for a reciprocal air transport agreement. (Agreement signed 3rd December, 1946.)

1st April.—Meat workers' industrial dispute in Queensland, involving approximately 7,000 workers. (Lasted until 7th July.)

13th April.—States Grants (Tax Reimbursement) Act, 1946, continuing uniform taxation, assented to.

16th April.—Agricultural Council of Federal and State Ministers for Agriculture decided that uniform legislation should be introduced in the several Parliaments to give effect to Commonwealth Wheat Stabilization Scheme.

2nd May.—Inauguration of Commonwealth Employment Service (which functioned formerly as the Commonwealth man-power organization).

6th May.—Commonwealth Government's proposals for complete medical service for Australia, free of charge, brought before conference of State Ministers of Health.

7th May.—Victorian Government sub-committee report on brown coal development submitted to full State Cabinet plan for making Victoria independent of New South Wales black coal supplies.

16th May.—Announced by General Manager of Commonwealth Aircraft Corporation Pty. Ltd. (Mr. L. J. Wackett) that De Havilland Vampire jet-propelled fighters would be built in Australia.

20th May.—Hearing of case originating in claim by Printing Industry Employees' Union for 40-hour week commenced in Commonwealth Arbitration Court.

23rd May.—Agreement reached between Australian and United Kingdom Governments for relief from double taxation. (*See* also 2nd August.)

10th June.—Final settlement of Lend-Lease and reciprocal aid between Australia and United States of America.

13th June.—Appointment of Commonwealth Insurance Commissioner under Life Insurance Act 1945 (assented to 16th August, 1945).

21st June.—Wheat Industry Stabilization Bill introduced in House of Representatives. (Act assented to 9th August.)

Overseas Telecommunications Bill to provide for establishment and operation of overseas telegraphic, telephone and similar services by the Commonwealth introduced. (Act assented to 7th August.)

1st July.—United Kingdom and Dominion Wool Disposals Ltd., known as Joint Organization, commenced operations.

24th July.—Coal Industry Bill introduced in House of Representatives providing *inter alia* for the setting up of a joint Commonwealth-State authority. (Act assented to 15th August. Complementary State Act assented to 25th September.)

2nd August.—Details of double taxation relief agreement between Britain and Australia announced. (Agreement signed 29th October; amending Act to Income Tax Assessment Act incorporating agreement assented to 3rd June, 1947.)

Railway Standardization Agreement Bill authorized the Commonwealth to act in an agreement with New South Wales, Victoria and South Australia. (Commonwealth Act assented to 15th August; State complementary Acts—South Australia, 10th December; Victoria, 21st December, 1948. New South Wales did not ratify agreement.)

15th August.—An Australian conversion loan of \$20,000,000 for a ten year period at 3½ per cent. floated in New York. (First of a series of operations undertaken by the Commonwealth in New York.)

22nd August.—Commonwealth and State Governments agreed to carry out programme of housing to provide employment in building construction industry for a minimum of 130,000 men over next ten years.

31st August.—South Australian electricity undertakings passed from private to State control.

2nd September.—Wool sales by auction resumed in Sydney following termination of war-time appraisal system.

28th September.—Constitution Alteration Referendum on Social Services, Organized Marketing of Primary Products and Industrial Employment resulted in approval for Social Services proposal only. (Act assented to on 19th December.)

16th October.—Ironworkers' and moulders' industrial dispute commenced in two iron foundries in Victoria. (By 24th October it extended to all iron foundries, and employees in engineering and allied trades were later involved. Dispute lasted until 7th May, 1947.)

30th October.—Commonwealth Government moved in Arbitration Court for investigation of basic wage. Announced that Court had "accepted broadly" that 40-hour week should be basis of working hours in Australia.

31st October.—Basic wage inquiry, adjourned in 1940, to be re-opened.

14th November.—Commonwealth Budget for 1946-47 introduced, providing for expenditure of £444,000,000 and revenue of £385,000,000. Estimated expenditure on Defence and Post-war Charges was £221,000,000 (including £35,000,000 for re-establishment and repatriation), on social services £68,000,000 and on new works £26,000,000. Clothing and household drapery would be exempted from Sales Tax, the general rate of Sales Tax to be reduced to 10 per cent. and Customs and Excise duties to be lowered. With income tax reductions made earlier in the year, these concessions would reduce the annual yield from taxation by about £37,000,000.

18th November.—Interstate executive of A.C.T.U. decided to apply to Arbitration Court for increase of £1 in basic wage.

20th November.—Experimental rocket range and supporting establishments for guided projectiles to be set up at Mount Eba (South Australia). Estimated cost £6,000,000. (Site subsequently changed to Woomera, 90 miles south-east of Mount Eba.)

21st November.—Defence (Transitional Provisions) Bill introduced in House of Representatives. (Act assented to 14th December.)

7th December.—Construction commenced on new Burrendong dam on Macquarie River, 20 miles from Wellington, New South Wales, to provide a catchment area of 5,360 square miles, at a cost of £2,000,000.

11th December.—Members of Gas Employees' Union in Melbourne decided to strike until claims for wage increases met. (Recommendation of A.C.T.U. to return to work on 16th January, 1947 accepted by gas workers, including those involved in Sydney and Adelaide.)

13th December.—Interim basic wage rise of 7s. in all capital cities (except Hobart, 6s.) announced. To operate from first pay period in December.

14th December.—Qantas Empire Airways Agreement Act, authorizing Government to acquire United Kingdom's interest in Qantas Empire Airways Ltd., assented to.

31st December.—With expiry of National Security Act, at midnight, 183 sets of regulations which restricted activities of citizens during war ceased to operate; 61 sets of regulations continued to operate for a further year under Defence (Transitional Provisions) Act. Ceiling price control on shares, and conditions regarding minimum holding period of shares before resale now removed.

1947.

During 1947 approximately 30,000 men and 3,000 women were discharged from the Services, rather more than two-thirds of them in the first half of the year. Employment (excluding rural and household domestic) increased by about 141,000 (114,000 males and 27,000 females). Unemployment remained negligible during the year; shortage of labour was a common complaint by employers. The free and assisted migration scheme came into operation during the year and an excess of 12,000 permanent departures over permanent arrivals in 1946 was converted into an excess of 12,000 arrivals over departures.

Seasonal conditions generally were very favourable and despite some losses due to rust and wet weather during the harvesting period, the 1947-48 wheat harvest was an all-time record of about 220,000,000 bushels. Meat and butter production were higher than in the previous season and wool only slightly lower. During 1947 nearly 39,000 houses were completed.

Export prices continued to rise rapidly, and at the close of the year were about 35 per cent. above the level at the beginning of the year. Total value of exports was over £300,000,000 and about 20 per cent. higher than in 1946. Import prices increased 17 per cent. above the level at the end of 1946; imports nearly 60 per cent. as compared with 1946, notwithstanding the imposition during the second half of the year of increasingly severe restrictions on imports from dollar areas. Retail prices increased by less than 6 per cent. in the year and wholesale prices by about 13 per cent. After the removal of control at the end of 1946 share prices advanced substantially. Following the settlement of the metal trades dispute in Victoria margins prescribed in the metal trades award were substantially increased, and similar increases were subsequently granted in other industries. Average factory earnings in the last quarter of the year were 13 per cent. above the previous year.

After a period of relative stability over the previous five years, national income started to rise, and gross private investment, which had been 14 per cent. of gross national product in 1945-46, rose to about 20 per cent. in 1947.

6th January.—Stock exchanges conducted business on free market, following lifting after five years of Government restrictions on share dealings.

Abandonment of war-time price stabilization subsidies by Commonwealth Government commenced with withdrawal of subsidy on tobacco, resulting in immediate price increase.

14th February.—Termination of fourth and final stage of demobilization of Australian fighting forces reached. Forces reduced to 60,000.

4th March.—Australia to make gift of £A.25,000,000 to Britain, in form of reduction of Britain's sterling debts in Australia. (Act appropriating grant assented to 11th June.)

13th March.—International Monetary Agreements Bill approving Australia becoming a member of International Monetary Fund and International Bank for Reconstruction and Development introduced. (Act assented to 2nd April. Australia's application for membership approved 25th May.)

19th March.—Majority of Full Arbitration Court decided that Basic Wage and 40-hour Week cases would be heard separately.

23rd March.—Extension of dispute in Victoria involving members of Amalgamated Engineering Union caused stoppage of all tramway buses, and cuts in suburban and country rail services. (See 16th October, 1946.)

3rd April.—Wage pegging regulations to be relaxed to give all industrial authorities (Commonwealth and State) power to alter rates of pay in any type of case, provided the Chief Judge of the Commonwealth Arbitration Court is satisfied that an alteration is not opposed to national interests.

23rd April.—Full Arbitration Court ordered deregistration of Amalgamated Engineering Union, to take effect after fourteen days unless the union instructed its members to return to work in meantime. (Further move in dispute originating with ironworkers and moulders in Victoria on 16th October, 1946. See above.)

5th May.—After compulsory conference of parties to the industrial dispute in Victoria, representatives of Unions and employers agreed on terms of settlement of Metal Trades dispute which had existed in Victoria since October, 1946. (See 16th October, 1946, and subsequent dates.)

8th May.—Two hundred Local Government bodies in Australia directed to bank with the Commonwealth Bank from 1st August.

28th May.—Writ lodged in High Court by Melbourne City Council challenging validity of Banking Act.

26th June.—Following settlement of metal trades dispute in Victoria (see above), Federal Arbitration Court granted substantial marginal increases to metal trades' employees in higher classifications but not to those in lower paid positions.

30th June.—Census of Australia. First since 1933.

1st July.—Forty-hour week comes into operation in New South Wales for all employees working under State awards.

3rd July.—Purchase by Commonwealth Government of shares in Qantas Empire Airways Ltd. held by Queensland and Northern Territory Aerial Services Ltd. (approving Act assented to 24th June, 1948). Qantas Empire Airways Ltd. now completely owned by Commonwealth Government. (See 14th December, 1946.)

23rd July.—Australia agreed to take 4,000 displaced persons as migrants this year through International Refugees Organization, and 12,000 each following year if Organization can supply shipping.

1st August.—Charges imposed by Commonwealth Government on airline operators in Australia for use of civil airways facilities provided by Commonwealth.

13th August.—Full High Court declared invalid Section 48 of Banking Act 1945 requiring municipal councils to transfer their accounts from private banks to Commonwealth Bank. (See 8th and 28th May.)

22nd August.—Government authorized resumption of private trading with Japan.

Prime Minister announced heavy reduction of all imports from dollar areas and severe restrictions on dollar advances for travellers.

8th September.—Federal Arbitration Court gave judgment reducing standard weekly hours of work in industry from 44 to 40 as from 1st January, 1948.

19th September.—Commonwealth Budget for 1947-48 presented, providing for expenditure of £427,000,000 and revenue of £397,000,000. Estimated expenditure on Defence and Post-war Charges was £168,000,000 (including £39,000,000 for re-establishment and repatriation), on social services £77,000,000 and on new works £33,000,000. The abolition of War-time Company Tax, the suspension of the Gold Tax and concessions in Sales Tax, with the income taxation reductions made earlier in the year, were estimated to reduce the taxation yield by about £42,000,000 a year.

15th October.—Banking Bill to nationalize Australian trading banks introduced into House of Representatives. (Act assented to 27th November.)

17th October.—British Food Minister announced that Australia will be asked to launch a great food-growing scheme to help Britain. It provides for long-term contracts for the supply of meat, wheat, dairy products, nuts and other food for which Britain will pay by increased exports.

5th November.—Defence (Transitional Provisions) Bill introduced in House of Representatives to continue for another year controls on food, prices, rent, capital issues and land sales. Other regulations were amended or discontinued. (Act assented to 11th December.)

27th November.—Constitution Alteration (Rents and Prices) Bill introduced into House of Representatives. (Bill subsequently passed both Houses. See 29th May, 1948, for referendum results.)

28th November.—Trading banks and States of Victoria and South Australia (Western Australia later) applied to High Court for writs to prevent Federal Government acquiring monopoly of banking business. (See 15th October.)

11th December.—Agreement signed for development of Blair Athol coal-fields in Queensland through expenditure of about £18,000,000 of British capital.

18th December.—Announcement of big wheat deal, under which Australia contracted to sell to Britain 80,000,000 bushels from 1947-48 harvest at 17s. per bushel (Australian currency) and 25,000,000 bushels to India at 18s. 6d.

1948.

Employment continued to increase during 1948, the total increase (excluding rural and household domestic) being about 88,000 (63,000 males and 25,000 females). The number on unemployment benefit remained negligible during the whole year and labour shortages continued fairly generally. The migration programme was carried on during the year with increasing vigour and permanent arrivals exceeded permanent departures by 48,000.

Although black coal production for the whole of Australia reached 14,800,000 tons, there were at times serious shortages resulting in restrictions in electricity and gas supplies and in transport services. Seasonal conditions continued favourable, the 1948-49 wool clip being slightly larger than in the previous year, and the wheat crop considerably above average although well below the previous year. There were about 48,000 new houses completed during 1948.

Exports rose to over £500,000,000, an increase of 60 per cent. over 1947, and imports to about £380,000,000, an increase of 40 per cent. over 1947. Export prices increased more than 25 per cent. during the year and import prices by 6 per cent. Retail prices increased about 10 per cent. during the year, wholesale prices about 14 per cent. Average factory earnings in the last quarter were 13 per cent. above the last quarter of 1947.

Partly as a result of increasing prices, national income continued to rise, and gross private investment continued at about 20 per cent. of gross national product.

1st January.—Forty-hour week became effective throughout Australia.

16th January.—Emergency Transport Bill, giving sweeping powers to Victorian Government to maintain essential services in any future emergency, passed by Victorian Legislative Assembly. (Assented to 20th January, proclaimed 15th November.)

23rd January.—Secretary to the Treasury (Mr. S. G. McFarlane) appointed fourteenth director of the International Monetary Fund and Bank of World Reconstruction and Development. The Commonwealth Statistician (Dr. Roland Wilson) to be alternate director.

2nd February.—Railway dispute on wages awards in Queensland involving about 19,000 railwaymen. (Lasted till 4th April.)

9th February.—Bank nationalization case opened in Full High Court in Melbourne. (See 15th October and 28th November, 1947, and 11th August, 1948.)

20th February.—Major water conservation works in £25,000,000 plan for "Drought proofing" Victoria, involving, amongst other works, the enlargement of Eildon reservoir, commenced.

27th February.—Drastic powers assumed by Queensland Government to end railway dispute. State of emergency declared.

10th March.—Queensland Government Industrial Law Amendment Act of 1948 assented to, granting police extraordinary powers to prevent "picketing". (Act repealed 16th September.)

25th March.—International trade charter signed in Havana.

22nd April.—International Wheat Agreement Bill introduced into Parliament. (Assented to 24th June. Failure of United States of America and other nations to ratify agreement rendered it inoperative.)

29th April.—Minister for Defence announced five-year defence programme of £250,000,000 including £33,500,000 for scientific research.

5th May.—Minister for Housing in New South Wales announced scheme for £8,000,000 housing project to meet industrial expansion, involving 5,000 homes in the Wollongong-Port Kembla district. Scheme will take five years to complete.

29th May.—Constitution Alteration (Rents and Prices) Referendum resulted in majorities in all States against proposal.

3rd June.—Australian Iron and Steel Ltd. plans to spend £20,000,000 in the next ten years on extensions to its Port Kembla works to include a new tinplate mill and blast furnaces on an area of more than two square miles.

21st June.—Conference between Prime Minister and State Premiers to discuss organization of price control by the respective states when control is relinquished by Commonwealth in September.

22nd June.—Meat and clothes rationing ceased throughout Australia.

3rd July.—Prime Minister left for London to discuss empire trade and other problems.

12th July.—Announcement of modified wheat stabilization plan guaranteeing a price of 6s. 3d. per bushel f.o.r. ports for bulk wheat. (Subsequently adopted by majority of growers in four main wheat producing States and ratified by Commonwealth—Wheat Industry Stabilization Act assented to 25th November—and State Governments, the plan will operate for the five years 1948-49 to 1952-53).

11th August.—Judgment delivered by Full High Court declaring invalid certain vital sections of Banking Act 1947. (*See* 9th February.)

16th August.—Control of rents passed from Commonwealth to States.

19th August.—New Zealand currency restored to parity with sterling.

24th August.—Announcement of increase from £360,000,000 to £569,000,000 in national works programme to cushion a possible depression during the next five years, covering 6,245 works projects throughout Australia.

2nd September.—Minister for Commerce and Agriculture announced that, under terms of a seven-year agreement operating from June, 1948, Australia will ship to United Kingdom the total exportable surplus of butter and cheese, less agreed quantities for other markets.

8th September.—Commonwealth Budget for 1948-49 introduced, providing for expenditure of £511,000,000 and revenue of £493,000,000. Estimated expenditure on Defence and Post-war Charges was £199,000,000 (including £10,000,000 United Kingdom Grant, £38,000,000 for re-establishment and repatriation and £23,000,000 to be set aside for war gratuities), on social services £88,500,000, and on capital works and services £38,000,000. Reductions in Income Tax, Social Services Contribution, Sales Tax and Excise Duty were expected to reduce the yield from taxation by about £29,000,000 a year.

20th September.—Control of prices taken over by individual States from Commonwealth. Thirty thousand items released from price control, but control continued on essential commodities and services, and house and agricultural land sales (about 20,000 items).

30th September.—Bill introduced into House of Representatives providing for acceptance by Australia of the Havana Charter for an International Trade Organization and a General Agreement on Tariffs and Trade. (Act assented to 17th December. Actual acceptance, however, conditional on that of United Kingdom and United States of America.)

6th October.—Coal miners' dispute in Southern coal-fields, New South Wales (Kemira Tunnel Dispute), resulting in general stoppage of coal production. (Settled 8th November.)

20th October.—Defence (Transitional Provisions) Bill introduced to extend for further twelve months certain National Security Regulations. (Act assented to 21st December.)

24th October.—Announced that Joint Coal Board would spend £16,000,000 on mechanizing and modernizing Australian coal mines.

10th November.—Judicial Committee of Privy Council granted Commonwealth Government leave to appeal against the judgment of the High Court of Australia, which declared Section 46 of the Banking Act 1947 invalid. (*See* 26th July, 1949.)

12th November.—Announcement of new agreement under which Britain will buy more than half of Australia's dried fruit production for the next five years.

15th November.—Victorian Government proclaimed as law the Essential Services Act. (*See* 16th January.)

22nd November.—Legislation approved to establish and constitute an Australian Shipping Board to run a Commonwealth line of ships. (Shipping Bill introduced in Senate 9th December; Act assented to 25th March, 1949.)

29th November.—New Australian made car, the "Holden", displayed publicly for first time.

1949.

A general black-coal strike lasting seven weeks in July and August, together with heavy flooding in the northern coal fields of New South Wales, seriously disrupted productive activity, large coal consumers such as the steel and cement producing industries being particularly affected. During this period of industrial dislocation the numbers of persons unemployed rose sharply to more than 100,000, but otherwise conditions of labour shortage continued throughout the year. Employment (excluding rural and household domestic) increased by about 80,000 (60,000 males and 20,000 females). Most of this increase was due to immigration, which was about three times as great as in 1948. Permanent arrivals exceeded permanent departures by about 150,000.

Following the black-coal strike, secondary industry revived rapidly and during the last three or four months of 1949 production of basic essentials such as coal, gas, electricity, iron and steel, and cement was well above the level of the previous year. There were about 53,000 new houses completed during 1949.

For the third year in succession seasonal conditions were exceptionally favorable, although heavy rains and floodings did considerable damage in the northern and eastern areas of Australia. Wool production in 1949-50 was about 10 per cent. higher than in the previous year and wheat production was very close to the all-time record established in 1947-48. With increases in wool prices more than balancing falls in wheat and metal prices, exports continued to rise in value. The value of imports rose even faster, the main increases being in motor vehicles and machinery of all kinds.

Retail and wholesale prices increased by about 10 per cent. during the year.

21st January.—Prime Minister stated, that before proceeding with plans for the development of the Australian Northern Territory, the Federal Government had requested British Government to agree to take, at a reasonable price, all surplus beef produced in Australia (see 28th April).

31st January.—National Savings Campaign launched by the Prime Minister on termination of Savings Certificate Scheme.

7th February.—Announcement of plans to form £1,000,000 Australian company to produce a cheap four-seater aluminium car.

8th February.—Sydney storemen and packers decided to refuse to deliver wool, skins, tallow and hides from stores unless claim for 30s. a week increase granted within seven days. (Ban came into force on 16th February. Dispute settled 30th March).

12th February.—Completion of sowing of 30,500 acres of sorghum on the Peak Downs for the Queensland-British Food Corporation (see 17th October, 1947).

13th February.—The Commonwealth to build hostels in Newcastle, Port Kembla, Adelaide and Melbourne to accommodate 100,000 European migrants to arrive in the next 18 months.

14th February.—A conference of Federal, New South Wales and Victorian Ministers under chairmanship of the Federal Minister for Works and Housing adopted proposals for the diversion of the Snowy River.

16th February.—Decision of Commonwealth to admit women to clerical and professional grades of Commonwealth Public Service.

24th February.—Bills introduced to reduce rates of Income Tax and Social Services Contribution payable by individuals—to take effect from 1st July. (Acts assented to 12th March.)

4th March.—Ending of special hearing by Judge Kelly of Kemira Tunnel Dispute. (See 6th October, 1948. On 31st March judgment given that the Kemira Tunnel was to be driven by members of the Australian Workers' Union.)

10th March.—Pharmaceutical Benefits (Amending Act) Bill introduced, which provided, *inter alia*, for doctors to write prescriptions within the formulary on official forms. (Act assented to 25th March; subsequently amended—7th July—to permit doctors not to use official form if patients so requested. It operated on 25th July, when Federal Council of British Medical Association challenged validity of Act in High Court. Act declared invalid 7th October.)

16th March.—Bill authorizing construction of dams and weirs at Menindee, New South Wales at estimated cost of £2,300,000 introduced in New South Wales Lower House. Storage capacity of project is approximately 2,000,000 acre feet of water. Scheme will supply water to more than 1,000,000 acres of pastures. (Act assented to 18th April, 1949. Works commenced 12th October, 1949.)

21st March.—Agreement of wheat importing nations to purchase 450,000,000 bushels of wheat a year, mainly from United States of America, Australia and Canada—Russia and Argentine not partners to agreement. Australia's share 80,000,000 bushels a year. (Bill to approve acceptance of agreement by Australia introduced 19th May. Act assented to 30th June.)

15th April.—Agreement between Australia and New Zealand to give citizens of each country full Social Service benefits when resident in the other.

28th April.—Australian Prime Minister and British Minister of Food announced agreement to arrangements for increasing meat exports from Australia to United Kingdom. (Bill introduced 18th October for grant of financial assistance to Queensland and Western Australia for development of meat production by improving roads and other facilities for movement of live-stock. Act assented to 28th October.)

11th May.—Representatives of Australia, New Zealand and South Africa met in London to discuss promotion of use of wool in all countries, possible co-operation with South American countries, future development in other regions, and scientific research.

16th May.—New South Wales State Cabinet approved restrictions on use of electricity by industry and commercial and domestic users. Industry in County of Cumberland to reduce consumption of electricity by 30 per cent. as from 1st June.

Victorian State Cabinet ratified Murray River Agreement which, *inter alia*, provides for enlargement of Hume Weir and installation of hydro-electric plant. Agreement already ratified by Governments of Commonwealth, New South Wales and South Australia.

17th May.—Rural Finance Corporation Bill introduced in Victorian Legislative Assembly, providing for an institution to afford additional and more effective credit facilities for primary producers and those conducting or desirous of establishing secondary industries in country districts. (Assented to 8th November.)

Hearing of £10 per week basic wage claim commenced. (On 20th May full Arbitration Court refused to hear claim by Australian Council of Trade Unions for interim basic wage increase of £2 per week. Hearing of £10 per week basic wage claim adjourned until 26th May.)

Governor of Commonwealth Bank announced current advances policy to be observed by banks, designed to limit excessive demand for goods generally, and for capital goods in particular, in relation to supplies available.

19th May.—Conference between representatives of Federal and State Governments, Combined Colliery Proprietors' Association, Joint Coal Board, and Combined Mining Unions' Council to discuss coal miners' claims for 35-hour week, 30s. weekly wage increase, long service leave, nationalization of the coal industry and colliery and mining town amenities. (Conference subsequently collapsed—30th May—colliery proprietors refusing to limit discussion to mining unions' log of claims.)

20th May.—Bill introduced, providing for establishment of Australian Whaling Commission to carry on whaling activities in or near Australian waters. (Act assented to 12th July.)

25th May.—Bill introduced for construction and operation of works for the generation of hydro-electric power in the Snowy Mountains area for defence purposes and consumption in the Australian Capital Territory, and constituting the Snowy Mountains Hydro-electric Authority. (Assented to 7th July, 1949. Scheme officially commenced 17th October.)

26th May.—Federal Cabinet decided to make joint purchase with New Zealand Government of Christmas Island phosphate deposits. Deposits, estimated at 25 to 30 million tons, will cost £2,750,000. (Christmas Island Agreement Bill introduced 26th October; Act assented to 29th October.)

Central Council of Miners' Federation decided that, unless settlement of claims reached by 30th, nation-wide one-day stop-work meetings would be held to discuss future actions. (Meetings postponed till 16th June, following intervention by Coal Industry Tribunal calling a compulsory conference.)

6th June.—Full High Court unanimously declared invalid National Security (Liquid Fuel) Regulations, thus restoring free retailing of petrol. (Judgment given in a test case on the validity of petrol rationing which had been removed from the Brisbane Petty Sessions on 4th March on application by the Commonwealth Attorney-General. Court, in same judgment, also held that Women's Employment Regulations, and certain provisions of the National Security (War Service Moratorium) Regulations were void.)

9th June.—Coal Industry Tribunal stated it would announce a draft award on long-service leave for coal-miners on 14th. (Announcement withheld because of stop-work threat.)

10th June.—Announced that Victorian State and Municipal authorities plan to spend £46,000,000 in the next eight years in order to expand electricity generation and make it less dependent on supplies of black coal.

16th June.—New South Wales miners at stop-work meetings voted in favour of general coal strike on 27th unless all claims met in full. Endorsed by miners in all other States except Western Australia.

17th June.—Joint Coal Board announced most drastic coal rationing ever imposed in Australia. Floods on northern New South Wales coal-fields stopped delivery of coal.

22nd June.—Construction work on Dumaresq River marked the beginning of the Border River Scheme, designed to harness the waters of the Barwon, Macintyre and Dumaresq Rivers, separating New South Wales and Queensland.

27th June.—All Australian black coal mines idle through dispute over claims for 35-hour week, 30s. a week wage increase and long-service leave. Transport, power, lighting and gas supplies severely restricted in all States; much unemployment caused, especially in New South Wales. (See also 19th May, 26th May, 9th June, 16th June, 17th June, 29th June, 27th July, 2nd August, 15th August and 7th September. Work resumed 15th August.)

28th June.—Following abolition of Stevedoring Industry Commission, Stevedoring Industry Bill introduced to establish Australian Stevedoring Industry Board. (Assented to 18th July.)

29th June.—National Emergency (Coal Strike) Act, making illegal any kind of payment in support of coal strike, assented to. (Validity of Act subsequently upheld in High Court. Sentences and fines later imposed on union executive officers and unions by Chief Judge of Arbitration Court for contempt of orders made by him under Act.)

30th June.—Bill introduced to enable Commonwealth Government to require liquid fuel importers to hold stocks at specified places for defence requirements. (Assented to 12th July.)

8th July.—Australian Wool Growers' Council decided to adopt a new wool marketing scheme, embracing Australia, Great Britain, New Zealand and South Africa, to replace the Joint Organization, when existing scheme ends. (On 31st March, 1950 the Prime Minister announced the decision, at the London Wool Conference, of representatives of the four Governments concerned to continue the Joint Wool Organization scheme for the time being on its present basis.)

11th July.—Air transport agreement between Australia and India signed, to prevent uneconomic competition, for collaboration on fares and freights, and for reciprocal traffic rights.

12th July.—Prime Minister stated that Commonwealth Government would increase subsidy paid to certain gold mines. Rate of assistance to be raised from 4 to 6 per cent. of paid-up capital.

13th July.—Ministerial conference at Canberra agreed that final third of Snowy River waters be diverted into River Murray. New dam to be built on Upper Murray to assist in providing Murray Valley with extra 830,000 acre feet of irrigation water each year.

19th July.—Commonwealth Finance Minister's Conference in London recommended 25 per cent. cut in dollar imports. (Approved 3rd August by Federal Cabinet sub-committee.)

26th July.—Privy Council dismissed Commonwealth Government's appeal against High Court's invalidation of Commonwealth's bank nationalization legislation. (On 26th October reasons announced for dismissal of appeal were—(1) Commonwealth Government did not possess a certificate from High Court in terms of section 74 of the Constitution, (2) in any case, section 46 of Banking Act, empowering Federal Treasurer to order a bank to stop trading, infringed section 92 of the Constitution.)

27th July.—Victorian State Government proclaimed state of emergency, and invoked the provisions of the Essential Services Act to forbid strikes in certain industries proclaimed to be essential (see 27th June—Australian black coal mines dispute).

2nd August.—Troops commenced cutting coal from open-cut mines in New South Wales.

15th August.—General black coal strike ended following aggregate meetings of miners which rejected recommendation of Central Council of Miners' Federation for conference with Commonwealth and State Governments, whereupon Central Council ordered resumption of work (*see* 27th June).

Announced that experiments in air-freighting beef carcasses in north-western Australia had proved successful.

18th August.—Federal Government agreed to waive all duties on essential materials which States find necessary to import, mainly building materials, steel products and locomotives, because they are unobtainable in Australia.

Prime Minister stated that he would recommend to Cabinet a special grant of £8,000,000 to State Governments, to relieve losses incurred in coal strike. (Bill introduced 7th September, assented to 27th October.)

7th September.—Introduction of 1949–50 Commonwealth Budget, providing for expenditure of £541,300,000 and revenue of £532,600,000 on basis of existing legislation and commitments. Estimated expenditure on War and Repatriation (1939–45) Services was £101,000,000 and on Defence Services £64,000,000—less estimated credits of £11,000,000; on statutory payments to National Welfare Fund £121,000,000; and on Capital Works and Services £53,200,000. Proposals for Income Tax extensions of depreciation allowances and of life assurance and superannuation concessional rebates, Sales Tax reductions and exemptions, a reduction in Entertainments Tax, and remissions in Customs, Excise and Primage Duties will reduce revenue by £9,600,000 a year. Expenditure proposals included a further grant of £10,000,000 to the United Kingdom, additional payments of £9,000,000 to the States and a payment of £6,700,000 from Trust Fund balances to the War Gratuity Reserve. Taking these proposals into account, net revenue for 1949–50 was estimated at £532,000,000 and expenditure at £567,000,000, leaving £35,000,000 to be financed from Loan Fund.

Coal Industry Tribunal granted long-service leave to miners throughout Australia. New award provides for thirteen weeks' leave on full pay after a minimum of ten years' service. No miners to commence long-service leave before June, 1954, owing to present manpower shortage in the coal industry.

19th September.—Prime Minister announced devaluation of sterling against American dollar, and commensurate devaluation, as from commencement of business to-day, of Australian pound to 2 dollars 24 cents; new gold price announced—£A.15 9s. 10d. per fine ounce.

2nd October.—Prime Minister announced establishment of Immigration Planning Council, to assist in smooth and speedy assimilation of migrants into industry and the community.

12th October.—Defence (Transitional Provisions) Bill 1949 introduced, preserving until 31st December, 1950 certain National Security Regulations and others at present in force, making amendments to some, and discontinuing several regulations and orders as from 1st January, 1950. (Assented to 28th October.)

17th October.—Official opening by Governor-General of Snowy River project.

20th October.—Agreement on rail standardization (replacing original agreement—*see* 2nd August, 1946) signed by Commonwealth and South Australian Governments. (Railway Standardization (South Australia) Agreement Bill 1949 introduced in House of Representatives on 21st October—assented to 28th October. Complementary State Act assented to 1st December.)

Announced that Australian Government had arranged with International Monetary Fund for an initial drawing from fund of \$20,000,000.

15th November.—Re-introduction of petrol rationing in all States except Tasmania (*see* 6th June).

8th December.—Announcement of new sugar agreement with United Kingdom. In conformity with existing arrangements United Kingdom would buy all of Australia's exportable sugar surplus up to end of 1952; from 1953 to 1957 arrangements to be made to find a market for 500,000 tons of Australian sugar annually in British Commonwealth preferential market—300,000 tons to be absorbed in United Kingdom market at a guaranteed price to be negotiated annually.

12th December.—Coal Industry Tribunal rejected Miners' Federation claim for reduction of working hours from 40 to 35 per week in coal industry in five States.

APPENDIX.

(Recent information which has come to hand since the various chapters were sent to press is given hereunder.)

CHAPTER III.—GENERAL GOVERNMENT.

§ 1. Scheme of Parliamentary Government.

Numbers of Ministers and Members of the Legislatures, pp. 74 and 79.—The following table shows the numbers of ministers and members in each of the legislative chambers at 30th September, 1950.

MINISTERS AND MEMBERS OF COMMONWEALTH AND STATE PARLIAMENTS,
30th SEPTEMBER, 1950.

		C'wealth.		N.S.W.		Vic.		Q'land.		S. Aust.		W. Aust.		Tas.		Total.	
		Minist'rs.	Members.	Minist'rs.	Members.	Minist'rs.	Members.	Minist'rs.	Members.	Minist'rs.	Members.	Minist'rs.	Members.	Minist'rs.	Members.	Minist'rs.	Members.
Upper House	..	5	60	2	60	4	34	(a)	(a)	2	20	2	30	..	19	15	223
Lower House	..	14	123	14	94	8	65	11	75	4	39	8	50	9	30	68	476
Total	..	19	183	16	154	12	99	11	75	6	59	10	80	9	49	83	699

(a) Abolished in 1922.

§ 2. Parliaments and Elections.

Commonwealth Elections, p. 82.—The following table shows, for each State and Territory, particulars of the electors enrolled for, and of those who voted at the 1949 Commonwealth election:—

COMMONWEALTH ELECTION, 10th DECEMBER, 1949.

State, etc.	Electors Enrolled.(a)			Electors who Voted.(a)			Percentage of Electors who Voted.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
N.S. Wales ..	938,953	977,793	1,916,746	911,466	937,106	1,848,572	97.07	95.84	96.44
Victoria ..	662,535	707,286	1,369,821	640,057	673,737	1,313,794	96.61	95.26	95.91
Queensland ..	355,119	341,910	697,029	335,289	323,318	658,607	94.42	94.56	94.49
South Australia ..	211,329	222,991	434,320	205,120	215,317	420,437	97.06	96.56	96.80
W. Australia ..	158,433	157,338	315,771	152,195	149,134	301,329	96.06	94.79	95.43
Tasmania ..	80,201	81,339	161,540	77,588	77,473	155,061	96.74	95.25	95.99
Nor. Territory ..	4,424	2,162	6,586	3,471	1,847	5,318	78.46	85.43	80.75
Aust. Cap. Terr.	6,403	5,438	11,841	6,063	5,179	11,242	94.69	95.24	94.94
Total ..	2,417,397	2,496,257	4,913,654	2,331,249	2,383,111	4,714,360	96.44	95.47	95.94

(a) All electorates contested, and, except for the Territories, numbers identical for Senate and House of Representatives.

There were 505,275 informal votes (11 per cent.) cast for the Senate election, and 93,604 (2 per cent.) for the House of Representatives election.

Double Dissolution, p. 81.—On 19th March, 1951, for the second time in history, a double dissolution of the Commonwealth Parliament was proclaimed. The Governor-General granted the Prime Minister's request, based on the ground that the Senate, by referring the Commonwealth Bank Bill 1950 (No. 2) to a Select Committee, after it had already amended it more than three months earlier in a manner unacceptable to the House of Representatives, had "failed to pass it". (See p. 17 section 57 of the Constitution.)

The Parliaments of the States—Particulars of Elections, pp. 84-91.—The following table shows particulars of the 1950 elections for the Lower Houses of each State :—

STATE PARLIAMENTS : LOWER HOUSE ELECTIONS, 1950.

State.	Date of Election.	Electors Enrolled— Whole State.			Contested Electorates.					
					Electors who Voted.			Percentage of Electors who Voted.		
		Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
N.S. Wales ..	17.6.50	940,150	979,329	1,919,479	811,027	829,286	1,640,313	93.60	91.70	92.63
Victoria ..	13.5.50	656,800	706,051	1,362,851	596,357	625,377	1,221,734	95.28	93.58	94.40
Queensland ..	29.4.50	(a)	(a)	718,685	(a)	(a)	636,762	(a)	(a)	92.52
S. Australia ..	4.3.50	(a)	(a)	437,832	(a)	(a)	290,306	(a)	(a)	93.15
W. Australia ..	25.3.50	155,903	154,496	310,399	113,441	115,857	229,298	90.93	91.06	90.99
Tasmania ..	6.5.50	80,228	81,422	161,650	76,517	76,268	152,785	95.37	93.67	94.51

(a) Not available.

Elections were also held for the State Upper Houses during 1949 or 1950

§ 4. Administration and Legislation.

Governors-General and Commonwealth Ministries, p. 101.—The Commonwealth Ministry as at 30th September, 1950 was as follows :—

MENZIES GOVERNMENT (from 19th December, 1949). (The State from which each Minister was elected to Parliament is added in parenthesis).

MINISTERS.

<i>Prime Minister</i>	<i>The Rt. Hon. R. G. Menzies, K.C.,</i> (Vic.).
<i>Treasurer</i>	<i>The Rt. Hon. A. W. Fadden (Qld.).</i>
<i>Minister for Defence</i> (a)	<i>The Hon. Eric J. Harrison</i> (N.S.W.).
<i>Minister for Labour and National Service</i> <i>and Minister for Immigration</i>	<i>The Hon. H. E. Holt (Vic.).</i>
<i>Minister for Commerce and Agriculture</i> ..	<i>The Hon. J. McEwen (Vic.).</i>
<i>Minister for External Affairs and Minister</i> <i>for External Territories</i>	<i>The Hon. P. C. Spender, K.C.</i> (N.S.W.).
<i>Minister for National Development and</i> <i>Minister for Works and Housing</i> (b)	<i>The Rt. Hon. R. G. Casey, C.H.,</i> D.S.O., M.C. (Vic.).
<i>Minister for the Interior</i> (c)	<i>The Hon. P. A. M. McBride (S.A.).</i>
<i>Minister for Health</i>	<i>The Rt. Hon. Sir Earle Page,</i> G.C.M.G., C.H. (N.S.W.).
<i>Minister of Trade and Customs</i>	<i>Senator the Hon. N. O'Sullivan</i> (Qld.).
<i>Minister for Fuel, Shipping and Transport</i> (b)	<i>Senator the Hon. G. McLeay (S.A.).</i>
<i>Minister for Air and Minister for Civil</i> <i>Aviation</i>	<i>The Hon. T. W. White, D.F.C.,</i> V.D. (Vic.)
<i>Postmaster-General</i>	<i>The Hon. H. L. Anthony</i> (N.S.W.).
<i>Minister for the Army and Minister for the</i> <i>Navy</i>	<i>The Hon. J. Francis (Qld.).</i>
<i>Attorney-General</i>	<i>Senator the Hon. J. A. Spicer, K.C.</i> (Vic.).
<i>Vice-President of the Executive Council</i> ..	<i>The Hon. Dame Enid Lyons,</i> G.B.E. (Tas.).
<i>Minister for Social Services</i>	<i>Senator the Hon. W. H. Spooner</i> (N.S.W.).
<i>Minister for Repatriation</i>	<i>Senator the Hon. W. J. Cooper,</i> M.B.E. (Qld.)
<i>Minister for Supply</i> (b)	<i>The Hon. O. H. Beale (N.S.W.).</i>

(a) Designation altered on 25th October, 1950 to Minister for the Interior. (b) Designations altered on 21st March, 1950. (See p. 101.) (c) Designation altered on 25th October, 1950 to Minister for Defence.

State Ministers, pp. 102-104.—The composition of the Ministry in each State at 30th September, 1950 is shown below. The date on which each Ministry was sworn in is shown in parenthesis after the name of the State.

STATE MINISTERS, 1950.

NEW SOUTH WALES (30th June, 1950).

Premier and Colonial Treasurer—

THE HON. J. MCGIRR.

*Deputy Premier, Secretary for Public Works
and Minister for Local Government—*

THE HON. J. J. CAHILL.

*Chief Secretary, Minister for Co-operative
Societies and Assistant Treasurer—*

THE HON. C. R. EVATT, K.C.

Minister for Education—

THE HON. R. J. HEFFRON.

Attorney-General—

THE HON. C. E. MARTIN.

*Minister of Justice and Vice-President of
the Executive Council—*

THE HON. R. R. DOWNING, M.L.C.

Minister for Housing—

THE HON. C. A. KELLY.

Minister for Health—

THE HON. M. O'SULLIVAN.

*Minister for Secondary Industries and
Minister for Building Materials—*

THE HON. W. E. DICKSON, M.L.C.

Minister for Agriculture—

THE HON. E. H. GRAHAM.

Minister for Conservation—

THE HON. G. WEIR.

*Minister for Labour and Industry and
Minister for Social Welfare—*

THE HON. F. J. FINNAN.

Minister for Transport—

THE HON. W. F. SHEAHAN.

*Secretary for Mines and Minister for
Immigration—*

THE HON. J. G. ARTHUR.

Minister without Portfolio—

THE HON. F. H. HAWKINS.

Secretary for Lands—

THE HON. J. B. RENSHAW.

VICTORIA (27th June, 1950).

Premier and Treasurer—

THE HON. J. G. B. McDONALD.

*Chief Secretary, Minister in Charge of
Electrical Undertakings, and Minister
in Charge of Immigration—*

THE HON. KEITH DODGSHUN.

*Commissioner of Crown Lands and Survey,
Minister of Soldier Settlement, Minister
of Forests, and President of the Board of
Land and Works—*

THE HON. A. E. LIND.

*Minister of Transport, Minister of State
Development, Minister in Charge of
Prices, and a Vice-President of the
Board of Lands and Works—*

THE HON. H. J. T. HYLAND.

*Commissioner of Public Works, and a
Vice-President of the Board of Lands
and Works—*

THE HON. P. T. BYRNES, M.L.C.

Minister of Education—

THE HON. P. P. INCHBOLD, M.L.C.

*Minister of Agriculture, Minister of Mines,
and a Vice-President of the Board of
Lands and Works—*

THE HON. G. C. MOSS.

*Minister of Water Supply, and Minister
for Conservation—*

THE HON. R. K. BROSE.

Minister of Health—

THE HON. W. O. FULTON.

Attorney-General, and Solicitor-General—

THE HON. T. W. MITCHELL.

*Minister in Charge of Housing, and Minister
in Charge of Materials—*

THE HON. I. A. SWINBURNE, M.L.C.

Minister of Labour—

THE HON. TREVOR HARVEY, M.L.C.

QUEENSLAND (10th May, 1950).

Premier and Chief Secretary: and Vice-President of the Executive Council—

THE HON. E. M. HANLON.

Treasurer—

THE HON. V. C. GAIR.

Secretary for Public Lands and Irrigation—

THE HON. T. A. FOLEY.

Secretary for Agriculture and Stock—

THE HON. H. H. COLLINS.

Attorney-General—

THE HON. J. LARCOMBE.

Secretary for Labour and Industry—

THE HON. A. JONES.

Minister for Transport—

THE HON. J. E. DUGGAN.

Secretary for Mines and Immigration—

THE HON. W. POWER.

Secretary for Public Instruction—

THE HON. G. H. DEVRIES.

Secretary of Health and Home Affairs—

THE HON. W. M. MOORE.

Secretary of Public Works and Housing and Local Government—

THE HON. P. J. R. HILTON.

SOUTH AUSTRALIA (15th May, 1944).

Premier, Treasurer, Minister of Immigration and Minister of Industry and Employment—

THE HON. T. PLAYFORD.

Chief Secretary, Minister of Health, and Minister of Mines—

THE HON. A. L. McEWIN, M.L.C.

Attorney-General and Minister of Education—

THE HON. R. J. RUDALL, M.L.C.

Minister of Lands, Minister of Repatriation, and Minister of Irrigation—

THE HON. C. S. HINCKS.

Minister of Works, Minister of Railways, Minister of Marine, and Minister of Local Government—

THE HON. M. McINTOSH.

Minister of Agriculture and Minister of Forests—

THE HON. SIR GEORGE JENKINS, K.B.E.

WESTERN AUSTRALIA (1st April, 1947).

Premier, Treasurer and Minister for Forests and the North-West—

THE HON. D. R. McLARTY, M.M.

Deputy Premier, Minister for Education, Child Welfare and Industrial Development—

THE HON. A. F. WATTS, C.M.G.

Minister for Works, Water Supply and Housing—

THE HON. D. BRAND.

Minister for Lands, Labour and Immigration—

THE HON. L. THORN.

Attorney-General and Minister for Police and Fisheries—

THE HON. A. V. R. ABBOTT.

Chief Secretary and Minister for Local Government and Native Affairs—

THE HON. V. DONEY.

Minister for Health and Supply and Shipping—

THE HON. ANNIE F. G. CARDELL-OLIVER.

Minister for Transport, Railways and Mines—

THE HON. C. H. SIMPSON, M.L.C.

Honorary Minister for Agriculture and the North-West—

THE HON. G. B. WOOD, M.L.C.(a)

Honorary Minister for Housing, Mines and Forests—

THE HON. G. P. WILD, M.B.E. (b)

(a) On subsequent elevation to position of Minister, portfolio of North-West was transferred from the Hon. D. R. McLarty, M.M. (b) On subsequent elevation to position of Minister for Housing and Forests, these two portfolios were transferred from the Hon. D. Brand and the Hon. D. R. McLarty, M.M., respectively.

TASMANIA (25th February, 1948).

<i>Premier, Minister for Education and Minister administering Hydro-Electric Commission Act—</i>	<i>Minister for Lands and Works and Minister for Mines—</i>
THE HON. R. COSGROVE.	THE HON. E. E. REECE.
<i>Attorney-General—</i>	<i>Chief Secretary—</i>
THE HON. R. F. FAGAN.	THE HON. A. J. WHITE.
<i>Treasurer and Minister for Transport—</i>	<i>Honorary Ministers—</i>
THE HON. J. L. MADDEN.	THE HON. C. H. HAND.
<i>Minister for Agriculture and Agricultural Bank—</i>	(Minister for Forests and Minister controlling the Tourist and Immi- gration Department).
THE HON. J. J. DWYER, V.C.	THE HON. C. A. BRAMICH.
	(Minister for Housing).
	THE HON. R. J. D. TURNBULL.
	(Minister for Health).

§ 6. Cost of Parliamentary Government, pp. 108-9.

The cost of Parliamentary Government, Commonwealth and individual States, for the year 1948-49 was as follows:—

Commonwealth, £903,853 (2s. 4d. per head); New South Wales, £367,383 (2s. 5d.); Victoria, £263,455 (2s. 6d.); Queensland, £199,326 (3s. 6d.); South Australia, £142,858 (4s. 4d.); Western Australia, £181,227 (6s. 11d.); Tasmania, £113,643 (8s. 6d.); and total, £2,171,745 (5s. 7d.).

The amounts expended under the major headings for all Governments during 1948-49 were:—Governor-General or Governor, £215,910; Ministry, £179,493; Parliament, £1,484,148; Electoral, £279,085.

§ 7. Government Employees.

Australia, 1950, p. 110.—The number of Government employees in Australia in June, 1950 was as follows:—

Commonwealth Government: Males, 156,332; Females, 44,970; Persons, 201,302.
State Government and Semi-Government Bodies: Males, 337,196; Females, 58,146; Persons, 395,342.
Local Government Authorities: Males, 59,988; Females, 4,453; Persons, 64,441.
Total: Males, 553,516; Females, 107,569; Persons, 661,085.

CHAPTER IV.—LAND TENURE AND SETTLEMENT.

§ 9. Settlement of Returned Service Personnel: 1939-45 War.

War Service Land Settlement Scheme, p. 133.—At 30th June, 1950 an area of 10,908,526 acres had been submitted by the several States for land settlement. Of this, 8,313,345 acres had been approved by the Commonwealth for acquisition, and 7,159,422 acres had actually been acquired by the States. The acreages and holdings allotted to ex-servicemen by the States at 30th June, 1950 were as follows:—New South Wales, 4,442,251 (1,455); Victoria, 530,973 (1,163); Queensland, 152,940 (289); South Australia, 46,118 (195); Western Australia, 633,736 (341); Tasmania, 298 (2); total, 5,806,316 (3,445).

§ 11. Alienation and Occupation of Crown Lands.

Summary, p. 145.—The alienation and occupation of crown lands in each State and Territory at 31st December, 1949, were as follows:—

ALIENATION AND OCCUPATION OF CROWN LANDS : AUSTRALIA, 31st DECEMBER, 1949.

State or Territory.	Private Lands.				Crown Lands.				Total Area.
	Alienated.		In Process of Alienation.		Leased or Licensed.		Other.		
	'000 Acres.	%	'000 Acres.	%	'000 Acres.	%	'000 Acres.	%	'000 Acres.
New South Wales(a)	50,881	25.69	14,885	7.52	116,405	58.78	15,866	8.01	198,037
Victoria ..	29,901	53.16	2,839	5.05	10,059	17.88	13,447	23.91	56,246
Queensland ..	23,123	5.38	4,639	1.08	356,735	83.14	44,623	10.40	429,120
South Australia(a) ..	13,510	5.55	666	0.28	172,911	71.10	56,128	23.07	243,245
Western Australia ..	20,993	3.36	11,569	1.85	225,496	36.10	366,530	58.69	624,588
Tasmania(b)	6,143	36.61	365	2.18	2,802	16.70	7,468	44.51	16,778
Nor. Territory(a) ..	455	0.13	..	..	158,438	47.28	176,224	52.59	335,117
Aust. Cap. Terr. ..	67	11.14	40	6.65	304	50.59	190	31.62	601
Australia ..	145,073	7.62	35,033	1.84	1,043,150	54.80	680,476	35.74	1,903,732

(a) At 30th June.

(b) At 30th June, 1950.

CHAPTER V.—TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 2. Oversea Shipping and § 5. Interstate Shipping.

Summary of Movements, pp. 148, 156-8.—The following table summarizes overseas and interstate shipping arrivals in the several States during the year 1948-49:—

OVERSEA AND INTERSTATE SHIPPING : VESSELS AND TONNAGE ENTERED, 1948-49.

State of Entry.	Steam.						Sailing.					
	Oversea.				Interstate.(a)		Oversea.		Interstate.(a)		Total Entered.	
	Direct.		Via Other States.				Direct and via other States.					
	Ves- sels.	Net Tonnage.	Ves- sels.	Net Tonnage.			Ves- sels.	Net Ton- nage.				
N.S.W.	486	1,931,393	439	2,375,725	1,221	3,635,880	5	113	6	465	2,157	7,943,576
Vic. ..	318	1,464,129	457	2,522,969	1,175	3,053,605	5	786	113	13,164	2,068	7,054,653
Qld. ..	264	992,548	190	1,044,800	360	926,718	1	5	..	..	815	2,964,071
S. Aust.	139	584,988	212	1,202,121	750	2,577,118	..	..	6	472	1,107	4,364,699
W. Aust.	458	2,380,866	20	87,843	464	2,163,803	..	..	1	166	943	4,632,678
Tas. ..	22	105,118	72	352,021	580	651,485	..	..	131	16,619	805	1,125,243
N. Terr.	9	15,922	..	..	15	26,103	..	..	..	..	24	42,025
Total	1,696	7,474,964	1,390	7,585,479	4,565	13,034,712	11	904	257	30,886	7,919	28,126,945

(a) Includes overseas vessels on interstate voyages.

§ 6. Tonnage of Cargo.

Oversea and Interstate Cargo, p. 160.—The table hereunder shows particulars of oversea and interstate cargo discharged in and shipped from each State during the year 1948-49 :—

TONNAGE OF CARGO DISCHARGED AND SHIPPED, 1948-49.

(Tons '000.)

State.	Discharged.				Shipped.			
	Oversea.		Interstate.		Oversea.		Interstate.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.
New South Wales ..	1,737	1,112	2,336	344	1,866	422	3,089	347
Victoria ..	1,959	928	2,050	191	881	524	486	227
Queensland ..	535	204	270	280	806	109	386	122
South Australia ..	647	186	1,363	181	1,057	104	1,824	183
Western Australia	810	123	263	170	724	172	57	75
Tasmania ..	152	19	384	285	90	35	385	218
Northern Territory	9	..	24	..	..	..	3	..
Total ..	5,849	2,572	6,690	1,451	5,424	1,366	6,230	1,172

B. RAILWAYS.

§ 1. General.

Summary of Operations, p. 168.—The following table gives a summary of the operations of all Government railways open for general traffic during the year 1948-49 :—

GOVERNMENT RAILWAYS : SUMMARY OF OPERATIONS, 1948-49.

Particulars.	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Aust.
Mileage open (route)								
30th June, 1949 .. miles	2,201	6,113	4,697	6,560	2,547	4,321	614	27,053
Capital cost .. £ mil.	18.7	173.1	55.8	42.1	32.6	28.0	3.3	4356.0
Cost per mile .. £	8,491	28,317	11,878	6,420	12,787	6,481	5,307	13,158
Gross Revenue .. £'000.	1,673	40,463	17,274	15,392	5,848	5,091	1,050	86,791
Gross revenue per train-mile ..	208. 1d.	208. 0d.	198. 11d.	178. 8d.	198. 4d.	148. 6d.	98. 5d.	188. 10d.
Working expenses .. £'000.	1,777	35,739	17,815	14,163	7,237	6,612	1,613	84,956
Working expenses per train-mile ..	218. 4d.	178. 8d.	208. 6d.	168. 3d.	238. 11d.	188. 9d.	148. 6d.	188. 5d.
Net revenue .. £'000.	-103	4,725	-542	1,228	-1,388	-1,522	-563	1,835
Net revenue per train-mile ..	-18. 3d.	28. 4d.	-7d.	18. 5d.	-48. 7d.	-48. 4d.	-58. 1d.	08. 5d.
Interest .. £'000.	310	5,038	1,881	1,419	1,006	1,063	113	10,913
Train-miles run .. '000	1,667	40,502	17,352	17,413	6,059	7,037	2,225	92,285
Passenger journeys .. '000	217	263,116	176,555	32,687	18,210	12,624	3,295	506,704
Goods, etc. carried '000 tons	546	18,080	8,859	6,888	3,793	2,737	802	41,705

(a) Includes Commonwealth proportion of Grafton-South Brisbane Line.

(b) Estimated.

C. TRAMWAYS.

Summary of Operations, p. 186.—The following is a summary of the operations of all electric tramways in Australia during the year 1948–49 :—Route mileage open for traffic, 30th June, 588; capital cost, £25,880,000; gross revenue—total, £12,347,000, per car-mile, 36.44d.; working expenses—total, £11,738,000, per car-mile, 34.64d.; interest, £507,000; car-miles run, 81,311,000; passenger-journeys, 871,553,000.

D. MOTOR OMNIBUS PASSENGER SERVICES.

Government and Municipal Services, p. 189.—The following is a summary of the operations of Government and Municipal omnibus services in Australia during 1948–49 :—Length of route, 3,268 miles; capital cost, £6,807,000; gross revenue—total, £5,499,000, per bus-mile, 27.08d.; working expenses—total, £5,690,000, per bus-mile, 28.02d.; bus-miles run, 48,958,000; passenger-journeys, 308,374,000.

Privately Controlled Motor Omnibus Passenger Services, p. 190.—The following is a summary of the operations of privately controlled omnibus services during 1948–49 in the States of New South Wales, Victoria, South Australia and Western Australia, respectively :—Capital cost, £881,000, Victoria and South Australia not available, £591,000; gross revenue, £1,505,000, £1,169,000, £515,000, £844,000; bus-miles run, 17,490,000, 17,223,000, 5,645,000, 11,318,000; passenger-journeys, 86,859,000, 72,311,000, 10,836,000, 30,831,000. Particulars of Victoria are given for the first time.

F. MOTOR VEHICLES.

Motor Vehicles on the Register, p. 192.—Motor vehicles registered and licences in force at 30th June, 1949, and gross revenue derived during the year 1948–49, were as follows :—

MOTOR VEHICLES : REGISTRATIONS AND REVENUE, 1948–49.
(Excluding Defence Service Vehicles.)

State or Territory.	Motor Vehicles Registered at 30th June.(a)					Gross Revenue Derived from—				
	Motor Cars.(b)	Commercial Vehicles.(c)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June.	Drivers' and Riders' Licences in force at 30th June.	Vehicle Registration and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
	No.	No.	No.	No.	No.	No.	£	£	£	£
N.S.W. ..	236,399	143,411	36,379	416,189	133.67	637,582	3,044,645	329,483	635,226	4,009,354
Vic. ..	189,445	130,277	31,706	351,428	164.29	487,407	2,310,321	121,862	289,996	2,722,179
Q'land ..	85,533	86,257	16,177	187,967	163.34	240,893	1,061,291	94,940	347,332	1,503,563
S. Aust. ..	78,607	38,372	17,087	134,066	199.19	171,010	974,518	95,883	48,120	1,118,521
W. Aust. ..	40,187	38,744	10,584	89,515	168.05	110,121	587,656	44,812	64,283	696,751
Tas. ..	22,485	11,659	4,709	38,853	144.23	44,422	276,383	22,211	57,723	356,317
Nor. Terr. . .	722	2,350	193	3,265	236.59	3,223	6,045	1,666	..	7,711
A.C.T. ..	2,119	1,077	298	3,494	180.73	5,350	15,921	2,652	116	18,689
Total ..	655,497	452,147	117,133	1,224,777	154.80	1,700,008	8,276,780	713,509	1,442,796	10,433,085

(a) Excludes trailers (61,146), road tractors, etc. (6,730), dealers' plates (3,577).
and hire cars.

(c) Includes lorries, vans, buses and utility trucks.

(b) Includes taxis
(d) Includes vehicles registered as primary producers' vehicles (63,574).

The following table shows the number of motor vehicles on the registers at 30th June, 1950 :—

MOTOR VEHICLES : REGISTRATIONS, 30th JUNE, 1950.

(Excluding Defence Service Vehicles.)

State or Territory.	Motor Cars.	Commercial Vehicles.	Motor Cycles.	Total.
New South Wales	272,985	162,625	42,461	478,071
Victoria	227,055	(a) 142,592	34,318	403,965
Queensland	99,846	93,921	19,152	212,919
South Australia	91,478	42,395	19,379	153,252
Western Australia	48,631	43,180	12,897	104,708
Tasmania	25,291	12,928	4,941	43,160
Northern Territory (b) ..	722	2,350	193	3,265
Australian Capital Territory ..	2,578	1,334	448	4,360
Australia	768,586	501,325	133,789	1,403,700

(a) Includes vehicles registered as primary producers' vehicles.

(b) At 30th June, 1949.

New Vehicles Registered, p. 194.—New vehicles registered during the years 1948-49 and 1949-50 were as follows :—

NEW MOTOR VEHICLES REGISTERED.

(Excluding Defence Service Vehicles.)

Vehicles.	N.S.W.	Vic.	Q'land.	S.A.(a)	W.A.	Tas.	A.C.T.	Total.
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1948-49.

Motor Cars	25,652	18,333	8,257	6,671	4,693	2,611	254	66,471
Commercial Vehicles, etc.	12,013	6 11,551	5,278	3,403	3,131	1,202	100	36,678
Motor Cycles	7,442	5,048	3,176	3,884	1,771	812	93	22,226
Total	45,107	34,933	16,711	13,958	9,595	4,625	447	123,375

1949-50.

Motor Cars	41,229	32,321	15,216	13,582	8,950	3,311	403	115,012
Commercial Vehicles, etc.	20,428	6 17,240	8,419	5,304	4,831	1,565	159	57,946
Motor Cycles	8,659	6,440	3,747	4,564	2,356	886	130	26,782
Total	70,316	56,001	27,382	23,450	16,137	5,762	692	199,740

(a) Excludes Northern Territory.

(b) Includes vehicles registered as primary producers' vehicles.

Survey of Motor Vehicles, 1947-48.—A survey of motor vehicles on the roads during 1947-48 was carried out by the Commonwealth Statistician in collaboration with the Government Statisticians and Road Transport authorities in each State. The survey covered such items as make, year of model, type of vehicle, horse-power and carrying capacity, etc., normally shown on motor registration forms, and also supplementary particulars such as those regarding purpose (private or business) obtained either as special addenda to the registration form of 1947-48 or on special forms collected with registration papers.

Results were published in a series of bulletins dealing with each State separately and with the Commonwealth as a whole, and summarized particulars were included in *Transport and Communication Bulletin* No. 40—1948-49 published by this Bureau.

H. AVIATION.

Statistical Summary, pp. 203-4.—The following is a summary of civil aviation for Australia in 1948-49 :—At 30th June, 1949—Registered aircraft owners, 335 ; registered aircraft, 748 ; pilots' licences—private 756 ; commercial 481 ; student, 1,169 ; 1st Class airline transport, 397 ; 2nd Class, 27 ; 3rd Class, 363 ; during 1948-49—Accidents—persons killed, 42 ; persons injured, 21.

Regular internal services' operations during 1948-49 showed the following results :—Hours flown, 224,853 ; miles flown, 35,242,000 ; paying passengers, 1,406,883 ; paying passenger-miles, 566,038,000 ; Freight—Actual tons, 33,381 ; ton-miles, 15,240,000 ; Mail—Actual tons, 1,580 ; ton-miles, 789,000.

The operations of services between Australia and oversea countries during 1948-49 were as follows :—Route-miles, 29,695 ; hours flown, 40,262 ; miles flown, 7,982,000 ; paying passengers, 45,296 ; paying passenger-miles, 144,869,000 ; Freight—Actual tons, 765 ; ton-miles, 2,808,000 ; Mail—Actual tons, 577 ; ton-miles, 3,331,000.

I. POSTS, TELEGRAPHS, TELEPHONES AND WIRELESS.

§ 1. General to § 5. Telephones.

Summary of Operations, pp. 207-224.—The following table is a summary of the operations of the Postmaster-General's Department during the year 1948-49 :—

POSTMASTER-GENERAL'S DEPARTMENT : SUMMARY OF OPERATIONS, 1948-49.

State.	Gross Revenue.	Expenditure.	Total Postal Matter Dealt with.				Money Orders Issued, Value.	Postal Notes Issued, Value.	Telegrams Dispatched.	Telephones.	
			Letters, Cards.	News-papers, Pac-kets.	Par-cels.	Registered Articles.				Lines Connected. (a)	Instruments Connected. (a)
	£'000.	£'000.	mil.	mil.	mil.	mil.	£'000.	£'000.	No.	'000.	'000.
N.S.W. . .	13,202	17,109	432.8	111.7	8.4	9.4	15,460	4,642	13,045	284	398
Vic. . .	9,687	14,389	311.7	58.1	5.5	5.5	7,406	3,826	8,233	229	325
Q'land . .	4,608	6,962	143.7	31.1	3.7	2.6	4,911	1,097	5,967	97	133
S. Aust. . .	2,827	3,994	90.4	13.9	1.8	1.3	2,160	870	3,830	64	89
W. Aust. .	2,066	2,896	70.1	17.8	1.4	1.2	1,976	584	3,612	39	55
Tas. . .	917	1,387	45.6	7.4	0.4	0.7	1,099	247	960	21	28
Aust.	33,307	53,544	1,094.3	240.0	21.2	20.7	33,012	11,266	635,647	734	1,028

(a) At 30th June, 1949.

(b) Includes £6,807,000 Central Office expenditure.

(c) Excludes

international telegrams—despatched, 1,123,020 ; received, 1,123,019.

§ 6. Radio Telegraphy and Telephony.

Radio-communication Stations Authorized, p. 225.—The following table shows particulars of radio-communication stations authorized at 30th June, 1949 :—

RADIO-COMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1949.

Class of Station.										
State for which Authorized.	Transmitting and Receiving.						Receiving only.			Grand Total.
	Aero- nauti- cal. (a).	Coast. (b)	Land. (c)	Mobile (gene- ral). (d)	Miscel- aneous.	Total.	Land. (c)	Mobile (gene- ral). (d)	Total.	
New South Wales	10	1	272	666	27	976	74	36	110	1,086
Victoria ..	5	3	162	562	11	743	199	185	384	1,127
Queensland ..	17	6	252	168	1	444	29	93	122	566
South Australia..	7	2	114	93	3	219	..	..	..	219
Western Australia	15	5	226	93	3	342	28	7	35	377
Tasmania ..	5	4	48	32	2	91	..	..	..	91
Nor. Terr. ..	5	1	115	45	..	166	..	..	..	166
Aust. Cap. Terr.	1	..	4	26	..	31	..	2	2	33
Total, Australia	65	22	1,193	1,685	47	3,012	330	323	653	3,665
Papua and New Guinea ..	4	6	132	32	..	174	..	..	..	174
Grand Total ..	69	28	1,325	1,717	47	3,186	330	323	653	3,839

(a) Ground stations (aeradio stations) for communication with aircraft stations. (b) Ground stations for communication with ship stations. (c) Stations established at fixed locations on land for the conduct of point-to-point services and for communication with mobile stations. (d) Stations installed in motor vehicles and small harbour vessels not falling within the definition of ship stations or aircraft stations, and stations comprising small portable apparatus used for various purposes. (e) Excludes 205 aircraft stations and 520 ship stations.

Broadcast Licences, p. 225.—The following table shows the number of broadcast licences issued at 30th June, 1949 and, for broadcast listeners' licences only, as at 30th June, 1950 also.

BROADCAST LICENCES ISSUED.

State in which Issued.	Broadcasting.		Broadcast Listeners'.		Broadcast Listeners'.		
	National Stations.	Commercial Stations.	One Receiver.	More than one Receiver.	Experimental.	One Receiver.	More than one Receiver.
New South Wales ..	(a) 11	35	646,923	55,689	942	678,399	64,632
Victoria ..	(a) 7	19	487,796	43,926	865	505,078	52,478
Queensland (b) ..	(a) 12	20	249,402	11,652	292	260,033	14,246
South Australia ..	3	8	184,866	26,590	298	194,113	32,610
Western Australia	(a) 7	11	127,990	11,300	167	133,199	16,129
Tasmania ..	3	8	61,212	6,876	95	64,369	7,917
Northern Territory	2	..	934	26	10	1,148	40
Aust. Cap. Terr. ..	1	1	3,552	288	13	4,872	365
Total ..	46	102	1,762,675	156,347	(c) 2,713	1,841,211	188,417

(a) Includes short-wave stations : New South Wales, 1 ; Victoria, 3 ; Queensland, 1 ; Papua, 1 (also 1 medium wave) ; Western Australia, 2. (b) Includes Papua. (c) Includes 31 licences in external territories.

CHAPTER VI.—EDUCATION.

§ 3. State Schools, § 4. Private Schools and § 9. Technical Education.

Returns for Year 1948, pp. 231-2, 235-7, 238 and 255-6.—The following table gives a summary of State, Private and Technical schools in each State for the year 1948 :—

EDUCATION : SUMMARY, 1948.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N. Ter.	Aust.
State Schools—								
Schools .. No.	2,618	2,193	1,545	743	538	329	5	7,971
Teachers ..	12,243	8,866	5,410	3,007	2,287	1,445	29	33,287
Net enrolment ..	381,088	222,118	145,121	78,049	(a) 62,509	38,208	974	928,067
Average weekly enrolment ..	348,855	210,230	137,300	74,301	62,509	35,831	835	869,861
Average daily attendance ..	304,070	188,020	121,165	67,330	57,594	31,640	735	770,554
Net Expenditure—								
Maintenance £'000	8,065	5,228	2,899	1,703	1,488	811	25	20,219
Buildings ..	1,070	1,017	307	262	303	185	2	3,146
Total ..	9,135	6,245	3,206	1,965	1,791	996	27	23,365
Private Schools—								
Schools .. No.	720	470	254	142	188	59	2	1,835
Teachers ..	5,591	2,985	1,769	908	783	361	11	12,408
Enrolment ..	114,066	82,367	40,349	17,169	19,312	7,789	302	281,354
Average attendance ..	101,257	(b) 73,430	36,310	15,175	17,928	6,745	247	251,092
Technical Schools—								
Schools .. No.	38	32	12	24	11	8	..	125
Teachers ..	2,760	2,403	352	597	423	284	..	6,819
Students ..	61,883	42,183	13,533	17,291	11,066	4,526	..	150,482
Total Expenditure £'000	1,373	1,183	218	199	218	44	..	3,235

(a) Average weekly enrolment.

(b) Estimated.

§ 6. Universities.

Teaching and Research Staff, etc., pp. 239-244. The following table gives a summary of the University statistics for the year 1949 :—

UNIVERSITIES : SUMMARY, 1949.

Particulars.	University—						University Colleges.		Total.
	Sydney.	Melbourne.	Q'land.	Adelaide.	West. Aust.	Tas.	New England.	Canberra.	
Teaching and Research Staff—									
Professors ..	50	37	25	25	15	15	..	3	170
Others ..	780	584	383	203	116	57	59	40	2,222
Total Students ..	10,182	9,228	4,395	4,752	1,968	682	245	(a) 301	31,753
Commonwealth Reconstruction Training Students ..	3,378	3,189	1,451	1,162	566	180	32	(b) 129	10,087
Degrees Conferred ..	1,251	1,313	320	373	248	102	..	..	3,607
Receipts—General Activities—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Government Grants ..	306	496	199	121	165	106	65	27	1,485
Total ..	744	789	319	244	195	120	87	32	2,530
Extra Activities ..	166	217	62	53	72	28	..	7	605
Expenditure—General Activities—									
Administration ..	68	66	22	16	17	10	14	5	218
Teaching ..	571	506	272	209	124	76	35	19	1,812
Total ..	754	813	359	323	192	112	87	28	2,668
Extra Activities ..	156	245	79	53	69	26	..	2	630

(a) Excludes 18 students enrolled at Melbourne University.

(b) Excludes 6 students enrolled at Melbourne University.

CHAPTER VIII.—PUBLIC HEALTH AND RELATED INSTITUTIONS.

B. INSTITUTIONS.

§ 2. Public Hospitals (other than Mental Hospitals).

Number, Staff, etc., pp. 317-8.—The following table gives a summary of details relating to Public Hospitals in each State for the year 1948-49 :—

PUBLIC HOSPITALS : SUMMARY, 1948-49.

Particulars.	N.S.W.	Vic. (a)	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Total.
Hospitals .. No.	254	87	121	60	88	24	1	635
In-patients treated during year .. No.	338,234	82,366	157,584	53,558	63,299	30,642	4,326	730,009
Inmates at end of year ..	12,226	5,298	5,764	2,333	2,381	1,188	135	29,325
Average daily resident ..	12,527	5,169	5,560	2,198	2,299	1,068	121	28,942
Revenue—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Government aid ..	6,041	1,536	2,510	835	1,110	479	55	12,566
Commonwealth hospital benefits ..	(b) 659	824	777	295	313	154	19	3,041
Fees ..	1,387	550	280	174	99	64	6	2,560
Public subscriptions ..	147	414	5	63	31	6	..	666
Total ..	8,424	3,503	3,611	1,532	1,579	736	80	19,465
Expenditure—								
Salaries and wages ..	5,328	1,760	1,969	817	721	437	41	11,073
Buildings ..	395	122	87	88	31	9	1	733
Total ..	8,586	3,954	3,636	1,598	1,586	736	80	20,176

(a) Nine months ended 31st March, 1949.

(b) Portion only of amount allocated to State hospitals.

CHAPTER IX.—WELFARE SERVICES.

A. COMMONWEALTH SOCIAL SERVICE BENEFITS.

§ 2. Age and Invalid Pensions, § 3. Maternity Allowances, § 4. Child Endowment, and § 5. Widows' Pensions.

General, pp. 326-333.—The following table gives a summary of age and invalid and widows' pensions, maternity allowances and child endowment for the year 1949-50 :—

SOCIAL SERVICES : SUMMARY, 1949-50.

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W.Aust.	Tas.	Aust.
Age and Invalid Pensions—							
Age Pensions in force .. No.	138,121	84,831	45,937	30,316	24,316	11,402	334,923
Invalid Pensions in force ..	34,604	14,328	12,155	4,955	4,294	3,158	73,494
Amount paid in Pensions .. £'000	18,736	10,783	6,383	3,944	3,088	1,623	44,557
Maternity Allowances—							
Claims paid .. No.	73,566	49,035	28,652	17,273	13,759	7,408	c 189,733
Amount paid .. £'000	1,155	778	459	275	220	120	(c) 3,008
Child Endowment—							
Family claims in force .. No.	263,959	168,904	99,582	57,695	48,456	24,286	d 662,949
Endowed children ..	717,071	452,333	285,413	154,642	133,557	70,744	d 1813925
Amount paid .. £'000	11,611	7,663	5,048	2,469	2,304	1,241	d 30,337
Widows' Pensions—							
Pensions in force .. No.	17,079	11,060	6,970	3,525	2,876	1,384	42,894
Children for whom pensions paid ..	7,573	3,874	3,086	1,340	1,218	669	17,760
Amount paid .. £'000	1,773	1,099	731	364	297	157	4,421

(a) Includes Australian Capital Territory.
40 claims amounting to £932 paid abroad.
paid, £1,420.

(b) Includes Northern Territory. (c) Includes
(d) Includes 67 claims and 165 children abroad, amount

§ 6. Commonwealth Unemployment and Sickness Benefits.

Statistics, pp. 335-6.—The following table shows the number of persons in each State admitted to benefit during the year, and on benefit at the end of the year, 1949-50 :—

UNEMPLOYMENT AND SICKNESS BENEFITS : PERSONS ADMITTED TO AND ON BENEFIT, 1949-50.

State.	Unemployment.		Sickness.		Special.(a)		Total.		
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.
N.S. Wales(b) ..	103,599	23,901	18,293	6,030	2,016	435	123,878	30,366	154,244
Victoria ..	854	183	11,217	3,903	449	323	12,520	4,409	16,929
Queensland ..	14,818	5,023	7,837	2,013	459	191	23,114	7,227	30,341
Sth. Australia(c)	5,534	978	5,030	1,279	355	80	10,919	2,337	13,256
W. Australia ..	5,308	752	4,328	1,102	166	60	9,802	1,914	11,716
Tasmania ..	135	16	2,331	509	84	42	2,550	567	3,117
Total ..	130,248	30,853	49,006	14,836	3,529	1,131	182,783	46,820	229,603

NUMBER ADMITTED TO BENEFIT, 1949-50.

N.S. Wales(b) ..	103,599	23,901	18,293	6,030	2,016	435	123,878	30,366	154,244
Victoria ..	854	183	11,217	3,903	449	323	12,520	4,409	16,929
Queensland ..	14,818	5,023	7,837	2,013	459	191	23,114	7,227	30,341
Sth. Australia(c)	5,534	978	5,030	1,279	355	80	10,919	2,337	13,256
W. Australia ..	5,308	752	4,328	1,102	166	60	9,802	1,914	11,716
Tasmania ..	135	16	2,331	509	84	42	2,550	567	3,117
Total ..	130,248	30,853	49,006	14,836	3,529	1,131	182,783	46,820	229,603

NUMBER ON BENEFIT, 30TH JUNE, 1950.

N.S. Wales(b) ..	254	81	3,763	1,266	149	226	4,166	1,573	5,739
Victoria ..	119	32	2,750	995	122	220	2,991	1,247	4,238
Queensland ..	484	84	1,323	392	65	116	1,872	592	2,464
Sth. Australia(c)	29	3	840	278	31	35	900	316	1,216
W. Australia ..	86	22	687	192	39	49	812	263	1,075
Tasmania ..	26	6	379	76	16	61	421	143	564
Total ..	998	228	9,742	3,199	422	707	11,162	4,134	5,296

(a) Excludes benefits granted to new Australians.
(c) Includes Northern Territory.

(b) Includes Australian Capital Territory.

The following table shows the amounts paid in each class of benefit in each State during 1949-50 :—

UNEMPLOYMENT AND SICKNESS BENEFITS : PAYMENTS, 1949-50.

(£.)

State.	Unemployment.	Sickness.	Special.(a)	Total.
New South Wales (b)	1,064,608	307,315	176,698	1,548,711
Victoria ..	6,666	217,783	141,277	365,726
Queensland ..	141,446	111,840	10,707	263,993
South Australia (c)	33,089	83,825	15,005	131,919
Western Australia	18,163	58,323	76,402	152,888
Tasmania ..	2,010	36,928	4,249	43,187
Total ..	1,266,072	816,014	424,338	2,506,424

(a) Includes payments to new Australians.
(c) Includes Northern Territory.

(b) Includes Australian Capital Territory

CHAPTER XI.—LABOUR, WAGES AND PRICES.

A. RETAIL PRICES AND PRICE INDEXES.

§ 7. Tabular Statements of Retail Price Index-Numbers.

All Items ("C" Series) Retail Price Index, p. 405.—The following table shows the "C" Series index-numbers for the December quarter, 1949 and June quarter, 1950 for each capital city and for the six capital cities combined, showing separate series for each of the four main groups of items :—

ALL ITEMS ("C" SERIES) RETAIL PRICE INDEX-NUMBERS (a) : CAPITAL CITIES.

(Base of each Group : Weighted average of Six Capital Cities, 1923-27 = 1,000.)

Period.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals. (b)
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GROUP I.—FOOD AND GROCERIES.

Dec. Qtr. 1949 ..	1,421	1,451	1,367	1,398	1,488	1,514	1,429
June „ 1950 ..	1,518	1,567	1,421	1,446	1,559	1,537	1,520

GROUP II.—HOUSING (4 AND 5 ROOMS) (c).

Dec. Qtr. 1949 ..	1,049	977	873	914	897	941	983
June „ 1950 ..	1,049	978	878	925	901	941	986

GROUPS I. AND II.—FOOD, GROCERIES AND HOUSING ("B" SERIES INDEX).

Dec. Qtr. 1949 ..	1,273	1,263	1,171	1,206	1,254	1,287	1,252
June „ 1950 ..	1,332	1,334	1,206	1,240	1,299	1,301	1,308

GROUP III.—CLOTHING.

Dec. Qtr. 1949 ..	2,161	2,117	2,072	2,113	2,155	2,129	2,132
June „ 1950 ..	2,307	2,234	2,197	2,227	2,264	2,272	2,261

GROUP IV.—MISCELLANEOUS.

Dec. Qtr. 1949 ..	1,389	1,397	1,316	1,410	1,305	1,234	1,378
June „ 1950 ..	1,446	1,407	1,340	1,448	1,349	1,246	1,413

GROUPS I. TO IV.—ALL ITEMS ("C" SERIES INDEX).

Dec. Qtr. 1949 ..	1,486	1,472	1,393	1,440	1,459	1,459	1,466
June „ 1950 ..	1,564	1,542	1,446	1,492	1,517	1,501	1,534

(a) The index-numbers given in the separate parts of the table cannot be compared with each other in order to show the relative cost of food and groceries, housing, etc., since the cost in 1923-27 in each group or combination is made equal to 1,000. (b) Weighted average. (c) The rent index-numbers measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. See footnote (b) on page 401.

B. WHOLESALE PRICES AND PRICE INDEXES.**§ 1. Melbourne Wholesale Price Index.**

Index-numbers, p. 412.—The following are the index-numbers for each group, and for all groups combined, of those commodities included in the series for the year 1949 :—

Index-numbers—Melbourne Wholesale Prices (Base of each Group : Year 1911 = 1,000), Year 1949 : Metals and Coal, 3,502 ; Wool, Cotton, Leather, etc., 3,966 ; Agricultural Produce, etc., 2,876 ; Dairy Produce, 2,309 ; Groceries, 2,558 ; Meat, 3,356 ; Building Materials, 4,611 ; Chemicals, 3,221 ; All Groups, 3,191.

§ 2. Basic Materials and Foodstuffs.

Index-numbers, p. 413.—Index-numbers for each group of commodities and for all groups combined for the new index of wholesale prices of basic materials and foodstuffs are shown below for the year 1949-50 :—

Index-numbers—Basic Materials and Foodstuffs (Base of each Group : Average three years ended June, 1939 = 1,000), Year 1949-50 : Basic Materials—Metals and Coal, 2,144 ; Oils, Fats and Waxes, 1,842 ; Textiles, 4,335 ; Chemicals, 1,867 ; Rubber and Hides, 1,426 ; Building Materials, 2,247 ; Total, 2,145 ; Foodstuffs and Tobacco, 1,979 ; Basic Materials and Foodstuffs—goods principally imported, 2,231 ; goods principally home produced, 1,982 ; Total All Groups, 2,054.

D. WAGES.**§ 2. Rates of Wage and Hours of Labour.**

Weekly Rates of Wage, pp. 416 and 418.—The following table shows for each State and Australia the weighted average nominal weekly rates of wage payable, and the index-numbers based thereon, for adult males and for adult females at 31st December, 1949 and 30th June, 1950 :—

WAGE RATES OF ADULT MALES AND FEMALES.

(WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK AND INDEX-NUMBERS OF WAGE RATES.)

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust. (a)
ADULT MALES—RATES OF WAGE.							
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
31st December, 1949	171 11	168 11	167 10	165 3	171 6	165 4	169 8
30th June, 1950..	179 4	176 10	176 11	172 3	178 8	169 7	177 3
ADULT MALES—INDEX-NUMBERS.—(BASE 51s. 3d.(a) IN 1911 = 1,000.)							
31st December, 1949	3,355	3,296	3,275	3,225	3,346	3,227	3,310
30th June, 1950..	3,499	3,450	3,452	3,360	3,486	3,309	3,458
ADULT FEMALES—RATES OF WAGE.							
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
31st December, 1949	108 1	112 4	108 5	101 0	105 5	106 4	109 1
30th June, 1950..	114 3	120 7	115 7	108 3	112 9	114 5	116 5
ADULT FEMALES—INDEX-NUMBERS.—(BASE 27s. 2d. (a) IN APRIL, 1914 = 1,000.)							
31st December, 1949	3,979	4,134	3,990	3,716	3,880	3,915	4,015
30th June, 1950..	4,206	4,438	4,255	3,984	4,151	4,211	4,284

(a) Weighted average for Australia.

§ 3. Basic Wages in Australia.

Current Commonwealth Basic Wage Rates, p. 429.—The basic weekly wage rates for adult males for each Capital City and the six capitals, operative from the first pay period in August, 1950, were as follows:—Sydney, 142s. od.; Melbourne, 140s. od.; Brisbane, 132s. od.; Adelaide, 134s. od.; Perth, 136s. od.; Hobart, 135s. od.; Six Capitals, 138s. od. Female rates varied approximately from 54 to 75 per cent. of male rates.

As from the first pay period in November, 1950 the automatic adjustments due to quarterly changes in the index of retail prices increased these rates by a further 4s. for Sydney, Hobart and the Six Capitals and by 3s. for Melbourne, Brisbane, Adelaide and Perth.

Following an exhaustive inquiry, the following rates were fixed by the Commonwealth Court of Conciliation and Arbitration to operate from the first pay period in December, 1950:—Sydney, 165s. od.; Melbourne, 162s. od.; Brisbane, 154s. od.; Adelaide, 158s. od.; Perth, 160s. od.; Hobart, 160s. od.; Six Capitals, 162s. od., and these also will be subject to automatic adjustment in accordance with the index of retail prices. At the same time the female basic wage rates were prescribed as 75 per cent. of the corresponding male rates.

Current State Basic Wage Rates, p. 435.—The table below shows the current basic weekly wage rates declared by the various State tribunals, operative in August, 1950:—

BASIC WEEKLY WAGE RATES FIXED BY STATE INDUSTRIAL TRIBUNALS.

State.	Basic Wage.		Date of Operation.	Family Unit (for Male Rate).
	Males.	Females.		
	£ s. d.	£ s. d.		
New South Wales ..	(a) 7 2 0	(a) 3 16 6	1.8.50	(b)
Victoria(c) ..	(7 0 0)	(3 15 6)	(1.8.50)	(c)
Queensland ..	(d) 6 16 0	(d) 4 5 6	31.7.50	Man, wife and three children
South Australia ..	6 14 0	3 13 2	1.8.50	" " " "
Western Australia..	(e) 7 3 6	(e) 3 17 6	31.7.50	Man, wife and two children
Tasmania(c) ..	(6 15 0)	(3 13 0)	(1.8.50)	(c)

(a) Sydney, Newcastle, Port Kembla-Wollongong, Broken Hill—Males, £7 9s.; Females, £4 0s. 6d. Elsewhere—Males, £6 19s.; Females, £3 15s. (b) Commonwealth Basic Wage operative—no defined family unit. (c) Non-declared. Rates (Capital City) shown are based on those of Commonwealth Court which are followed to a large extent. No defined family unit. (d) Southern Division (Eastern District—including Brisbane). Allowances are added for other Areas:—Males—Southern Division (Western District), 7s. 4d.; Mackay Division, 5s. 6d.; Northern Division (Eastern District), 10s.; Northern Division (Western District), 17s. 4d.; Females—half of these allowances. (e) Metropolitan Area. Basic wage from 31.7.50 for Gold-fields Areas and other portions of State excluding the S.W. Land Division—Males, £7 11s. 6d.; Females, £1 18s. 10d.; and for S.W. Land Division (excluding Metropolitan Area)—Males, £7 3s. 3d.; Females, £3 17s. 4d.

As with the Commonwealth basic wage rates, the State rates were also increased in November, 1950, the male rates for each State being as follows:—New South Wales, £7 6s.; Victoria (£7 3s.); Queensland, £6 19s.; South Australia, £6 17s.; Western Australia, £7 6s. 6d.; Tasmania (£6 19s.); as from December, 1950 male rates were:—New South Wales, £8 5s.; Victoria (£8 2s.); Queensland, £7 14s.; South Australia, £7 18s.; Western Australia, £8 6s. 6d.; Tasmania (£8), and important changes were made to female rates which affected their previously existing relationship with male basic wage rates.

E. EMPLOYMENT.

§ 1. Employment.

Wage and Salary Earners in Employment, p. 440.—The following are particulars of wage and salary earners in civil employment, excluding rural wage earners, females in domestic work in private homes and persons on the paid strength of the Defence Forces, for the month of June, 1950 :—

Males, Females and Persons, respectively : New South Wales—740,800, 278,500, 1,019,300 ; Victoria—510,700, 210,000, 720,700 ; Queensland—250,400, 83,100, 333,500 ; South Australia—165,700, 54,300, 220,000 ; Western Australia, 120,500, 39,900, 160,400 ; Tasmania—58,400, 19,400, 77,800 ; Australia (including internal territories)—1,858,700, 688,200, 2,546,900.

§ 2. Unemployment.

Unemployment of Members of Trade Unions, pp. 443 and 445.—The following particulars relate to unemployment of members of trade unions during the year 1949 and the June quarter of 1950, respectively :—Australia : Unions reporting, 377, 375 ; Membership, 790,630, 819,331 ; Unemployed—Number, 15,342, 6,361 ; Percentage, 2.0, 0.8. States : Percentage Unemployed—New South Wales, 3.2, 1.0 ; Victoria, 0.7, 0.5 ; Queensland, 0.9, 0.3 ; South Australia, 2.3, 0.7 ; Western Australia, 0.9, 1.5 ; Tasmania, 0.6, 0.8 ; Australia, 2.0, 0.8.

Figures for 1949 include particulars of all members of reporting unions indirectly affected by the industrial dispute in the coal mining industry (June–August, 1949) ; those directly affected are, however, excluded.

§ 4. Industrial Disputes.

Summary of Disputes (involving Stoppage of Work), p. 449.—The following table shows particulars of industrial disputes in each State during 1949 :—

INDUSTRIAL DISPUTES : SUMMARY, 1949.

State.	Number.	Establishments Involved.	Workpeople Involved.			Working Days Lost.	Estimated Loss in Wages. £
			Directly.	Indirectly. (a)	Total.		
New South Wales(b)	739	3,428	197,367	3,526	200,893	1,005,285	1,981,769
Victoria ..	20	193	22,018	..	22,018	60,112	115,883
Queensland ..	38	234	26,184	87	26,271	183,333	351,985
South Australia ..	18	45	5,845	147	5,992	28,318	51,541
Western Australia..	16	33	5,564	97	5,661	26,287	52,421
Tasmania ..	15	48	3,503	..	3,503	29,316	55,319
Northern Territory	2	2	200	..	200	1,261	2,522
Aust. Cap. Territory	1	1	39	..	39	78	96
Australia(b) ..	849	3,984	260,720	3,857	264,577	1,333,990	2,611,536

(a) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute. (b) The following disputes commenced in, and were uncompleted at the end of 1948, and in respect of "Number of Disputes", "Establishments Involved" and "Number of Workpeople Involved" are duplicated in the figures for 1949—

State.	Number of Disputes.	Establishments Involved.	Number of Workpeople Involved.		
			Directly.	Indirectly.	Total.
New South Wales	3	3	619	..	619

CHAPTER XII.—TRADE.

NOTE.—All figures in the following sections are subject to revision. Values are expressed in £A. f.o.b.

§ 7. Oversea Trade.

Summary of Movements, pp. 479-481.—The following is a summary of the total overseas trade movements of Australia during the year 1949-50 :—Merchandise—Exports, £611,616,000 ; Imports, £536,082,000 ; Commodity balance, £75,534,000 : Bullion and Specie—Exports, £2,043,000 ; Imports, £1,945,000 ; Balance, £98,000 : Total balance, £75,632,000.

§ 8. Direction of Oversea Trade.

Imports according to Country of Origin and Exports according to Country of Destination, pp. 482 and 484.—The following table shows particulars of the values of total imports and total exports of Australia, *including bullion and specie*, according to countries of origin or of destination, for the year 1949-50 :—

TOTAL OVERSEA TRADE, AUSTRALIA : COUNTRIES OF ORIGIN OR OF DESTINATION, 1949-50.

(£'000.)

Country of Origin or of Destination.	Imports.	Exports.
United Kingdom	278,828	237,631
Canada	13,276	9,030
Ceylon	8,937	6,070
India	27,660	37,034
Malaya (British)	4,926	5,566
New Zealand	4,968	21,303
Singapore	7,308	8,071
Other British Countries	23,636	29,237
Total British Countries	369,539	355,942
Belgium	3,583	27,492
Czechoslovakia	4,370	3,085
Egypt	241	9,693
France	10,673	40,661
Germany	6,483	16,578
Italy	9,058	19,406
Japan	6,999	23,977
Netherlands	3,190	9,869
Netherlands Dependencies—Indonesia	14,750	507
Persia	11,169	1,774
Poland	171	13,169
Soviet Russia	706	11,187
Sweden	7,755	5,044
United States of America	52,232	49,507
Other Foreign Countries	36,329	25,768
Total Foreign Countries	157,709	257,717
Outside packages	10,779	..
Total	538,027	613,659

§ 11. Classified Summary of Australian Oversea Trade.

Imports and Exports in Statistical Classes, pp. 492-3.—The following table shows the values of total imports and total exports in statistical classes for the year 1949-50 :—

TOTAL OVERSEA TRADE, AUSTRALIA : CLASSES, 1949-50.

(£'000.)

Classes.	Imports.	Exports.
I. Animal foodstuffs, etc.	3,744	79,930
II. Vegetable foodstuffs, non-alcoholic beverages, etc.	20,694	137,941
III. Alcoholic liquors, etc.	1,169	972
IV. Tobacco, etc.	12,395	308
V. Live animals	492	519
VI. Animal substances, etc.	2,817	329,316
VII. Vegetable substances, etc.	13,776	1,137
VIII. Apparel, textiles, etc.	99,761	3,127
IX. Oils, fats and waxes	52,382	3,306
X. Paints and varnishes	1,812	510
XI. Stones and minerals, etc.	6,573	10,548
XII. Metals, metal manufactures and machinery	227,473	27,816
XIII. Rubber and leather, etc.	11,259	2,154
XIV. Wood and wicker, etc.	8,822	2,228
XV. Earthenware, etc.	9,070	549
XVI. Paper and stationery	18,883	985
XVII. Jewellery, etc.	6,514	383
XVIII. Optical, surgical and scientific instruments	6,089	1,130
XIX. Drugs, chemicals, etc.	12,096	3,053
XX. Miscellaneous	20,261	5,704
XXI. Gold and silver, and bronze specie	1,945	2,043
Total	538,027	613,659

§ 15. Australian Index of Export Prices.

Monthly Index (Fixed Weights), p. 509.—The following are the export price index-numbers for the year 1949-50 :—

Export Price Indexes—Australia, Simple Aggregative Index : Fixed Weights
(Base of each section : Average of three years ended June, 1939 = 1,000),
Year 1949-50 : Wool, 4,727 ; Wheat, 4,002 ; Butter, 2,504 ; Metals, 4,212 ;
Meats, 1,969 ; Sugar, 3,694 ; Dried Fruits, 1,762 ; Tallow, 4,000 ; Hides,
4,792 ; Gold, 1,644 ; All Groups—Excluding Gold, 3,994 ; Including
Gold, 3,830.

Revised index-numbers for the years 1946-47, 1947-48 and 1948-49, respectively,
are as follows :—Wool, 1,734, 2,872, 3,649 ; Tallow, 3,614, 4,365, 4,986 ;
All Groups—Excluding Gold, 2,087, 2,955, 3,481 ; Including Gold, 2,027,
2,834, 3,324. Tallow has been revised for the years 1944-45 and 1945-46
also :—1,514, 1,608.

CHAPTER XIII.—POPULATION.

§ 3. Distribution and Fluctuation of Population.

Growth and Distribution, pp. 521-4, Mean Population, pp. 523-4.—The following table shows 1949 population figures for each State and Territory :—

ESTIMATED POPULATION.(a)

Population—	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
At 31st Dec., 1949—									
Males ..	1,594,724	1,073,298	594,154	342,937	280,457	145,838	8,728	10,409	4,050,345
Females ..	1,581,211	1,091,033	566,146	344,936	264,358	138,407	5,122	9,124	4,000,337
Persons ..	3,175,935	2,164,331	1,160,300	687,873	544,815	284,245	13,850	19,533	8,050,882

PERSONS.

Mean for year ended—									
Dec., 1949 ..	3,113,977	2,138,761	1,147,523	674,056	533,083	272,649	13,476	19,113	7,912,638
June, 1949..	3,063,973	2,113,286	1,134,738	665,139	522,184	268,259	12,847	18,434	7,798,860

(a) Excludes Australian defence personnel overseas and full-blood aboriginals.

§ 4. Elements of Increase.

Natural Increase, pp. 532 and 537 and Total Increase, p. 542.—The following table shows particulars of natural increase and of total increase during the year 1949 :—

POPULATION : NATURAL INCREASE AND TOTAL INCREASE. 1949.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
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NATURAL INCREASE.(a)

Persons ..	39,449	24,882	17,587	9,669	8,721	4,721	254	719	106,002
Rate(b) ..	12.67	10.73	15.33	14.39	16.36	17.32	18.85	37.62	13.40

TOTAL INCREASE.(c)

Persons ..	113,592	58,016	27,735	21,946	22,485	9,103	1,356	1,770	256,003
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(a) Excess of births over deaths, including deaths of defence personnel in Australia. (b) Excess of births over deaths, as defined in note (a), per 1,000 of mean population. (c) Includes deaths of defence personnel in Australia.

§ 6. General Characteristics.

Occupational Status, p. 556.—The number of persons usually in industry, business, trade or service who at the 1947 Census stated that they were out of a job on 30th June, 1947 was 82,774, consisting of 66,009 males and 16,765 females, or 3.5 per cent. of the males and 2.6 per cent. of the females in the wage-earning group, including those not at work. At the previous Census, which was taken in 1933 during the depression, 405,269 males and 75,775 females were unemployed, representing 25.5 per cent. of the males and 14.8 per cent. of the females in the wage-earning group.

During the period of heavy unemployment in 1933 approximately 91 per cent. of unemployment was due to scarcity of work, but in 1947 only 41 per cent. was stated to be due to this cause. The balance consisted of those who were not actively seeking work at the time of the Census, and those latter in turn consisted almost entirely, and in approximately equal proportions, of those who were indisposed through sickness or accident, and those who were resting between jobs.

POPULATION : PERSONS USUALLY IN INDUSTRY, ETC., BUT NOT AT WORK, CLASSIFIED ACCORDING TO CAUSE, AUSTRALIA, 1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Cause.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Unable to secure employment ..	355,935	56,296	412,231	16,489	2,131	18,620	-379,432
Temporarily laid off ..				11,864	2,315	14,179	
Sickness ..	17,223	8,268	25,491	13,941	4,155	18,096	-7,395
Accident ..	4,484	391	4,875	2,843	265	3,108	-1,767
Industrial dispute ..	1,526	85	1,611	452	23	475	-1,136
Voluntarily unemployed ..	4,579	2,802	7,381	173	50	223	-7,158
Changing job ..				386	82	468	22,829
Resting ..	1,590	308	1,898	15,456	6,558	22,014	
Other Causes ..				1,835	410	2,245	-24,211
Not stated ..	19,932	7,625	27,557	2,570	776	3,346	
Total ..	405,269	75,775	481,044	66,009	16,765	82,774	-398,270

(a) Excludes wage-earners stated to be employed part-time or on sustenance or relief work.

NOTE.—Minus sign (—) denotes decrease.

Of those persons usually in industry, business, trade or service, who at the 1947 Census stated the period since last working, 7.0 per cent. had not been working for a period of less than one week, 16.4 per cent. for less than two weeks, 25.2 per cent. for less than three weeks, 32.4 per cent. for less than four weeks, 50.1 per cent. for less than eight weeks, and 67.9 per cent. for under sixteen weeks.

POPULATION: PERSONS USUALLY IN INDUSTRY, ETC., BUT NOT AT WORK,
CLASSIFIED ACCORDING TO PERIOD SINCE LAST WORKING, AUSTRALIA,
1933 AND 1947.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Period since last working.	Census, 30th June, 1933.			Census, 30th June, 1947.			Increase, 1933-47.
	Males.	Females.	Persons.	Males.	Females.	Persons.	
Under 1 week	1,970	682	2,652	3,501	914	4,415	1,763
1 week	4,612	1,980	6,592	4,576	1,303	5,879	-713
2 weeks	5,698	2,218	7,916	4,279	1,221	5,500	-2,416
3	5,035	1,917	6,952	3,470	1,005	4,475	-2,477
4 weeks and under 8 weeks	16,637	5,382	22,019	8,672	2,445	11,117	-10,902
8 12	13,711	3,771	17,482	4,667	1,450	6,117	-11,371
12 16	17,815	4,542	22,357	3,908	1,107	5,015	-17,342
16 20	10,352	2,441	12,793	1,961	582	2,543	-10,250
20 24	7,007	1,512	8,519	1,323	330	1,653	-6,866
24 28	24,607	6,306	30,913	2,863	775	3,638	-27,275
28 32	6,289	1,171	7,460	946	266	1,152	-6,308
32 36	6,046	1,103	7,149	904	192	1,096	-6,053
36 40	7,240	1,213	8,453	841	160	1,001	-7,452
40 44	3,882	691	4,573	606	124	730	-3,843
44 48	113	10	123	27	9	36	-87
48 52	2,170	358	2,528	375	71	446	-2,082
Total under 1 year	133,184	35,297	168,481	42,913	11,894	54,807	-113,674
1 year and under 2 years	50,344	9,700	60,044	4,913	750	5,663	-54,381
2 years 3	69,848	8,667	78,515	1,095	155	1,250	-77,265
3 4	75,895	5,669	81,564	443	46	489	-81,075
4 and over	40,607	2,616	43,223	391	38	429	-42,794
Not Stated	35,391	13,826	49,217	16,254	3,882	20,136	-29,081
Total	495,269	75,775	571,044	66,009	16,765	82,774	-398,270

(a) Excludes wage-earners stated to be employed part-time or on sustenance or relief work.
NOTE.—Minus sign (—) denotes decrease.

§ 8. Oversea Migration.

Classes of Arrivals and Departures, p. 575.—Arrivals and departures during 1949 were:—Permanent new arrivals, 107,727; Australian residents returning from abroad, 28,116; temporary visitors arriving, 37,202; total arrivals, 233,135; Australian residents departing permanently, 18,457; Australian residents departing temporarily, 25,351; temporary visitors departing, 39,326; total departures, 83,134. Permanent migration refers to persons, other than Australian troops and dependants, intending residence for one year or longer—in Australia in the case of arrivals and abroad in the case of departures. Temporary migration refers to persons intending residence for shorter periods but includes Australian troops and dependants, irrespective of period of residence.

CHAPTER XIV.—VITAL STATISTICS.

§ 1. Marriages, § 2. Fertility and Reproduction, and § 3. Mortality.

Numbers and Rates, pp. 587-8, 595-6, 612-3 and 617.—The following table shows totals and rates for marriages, births, deaths, and infant deaths for 1949:—

MARRIAGES, BIRTHS, DEATHS AND INFANTILE DEATHS, 1949.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Marriages	28,757	20,066	10,234	6,247	4,951	2,422	130	192	72,999
Rate (a)	9.23	9.38	8.92	9.27	9.29	8.88	9.05	10.05	9.23
Births	68,812	46,873	27,748	16,042	13,511	7,110	346	819	181,261
Rate (a)	22.10	21.92	24.18	23.80	25.35	26.08	25.68	42.85	22.91
Deaths	29,364	21,991	10,161	6,373	4,790	2,389	92	100	75,260
Rate (a)	9.43	10.28	8.85	9.45	8.99	8.76	6.83	5.23	9.51
Infantile Deaths	1,878	1,026	686	444	357	170	13	13	4,587
Rate (b)	27.29	21.89	24.72	27.68	26.42	23.91	37.57	15.87	25.31

(a) Number per 1,000 of mean population.
births registered.

(b) Number of deaths under 1 year per 1,000 of live

Australian Life Tables. p. 616.—(i) *Life Tables prior to 1947.* It has been the practice at each Census from 1911 onwards to prepare Life Tables representative of the mortality experience of Australia. In 1911 the mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated by the Commonwealth Statistician. Tables were compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881–1890, 1891–1900 and 1901–1910. These compilations furnished a comprehensive view of Australian mortality in respect of sex, of time, and of geographical distribution, and practically superseded all Life Tables prepared in Australia prior to 1911. In addition, monetary tables based on the experience for the whole of Australia for the decennium 1901–1910 were prepared and published.

At the Census of 1921 Life Tables were prepared by the Commonwealth Statistician from the population recorded and the deaths in the three years 1920–22. Similarly in 1933 the Life Tables which were prepared by Mr. F. W. Barford, M.A., A.I.A. were based on the Census population and the deaths in the calendar years 1932–34.

(ii) *Life Tables of Census of 1947.* On the occasion of the 1947 Census, Life Tables representing the sixth in the series were compiled by the Commonwealth Actuary, Mr. W. C. Balmford, F.I.A. These were based on the population recorded, in conjunction with the deaths during 1946, 1947 and 1948, as it was considered undesirable to take into account deaths occurring prior to 1946 owing to the possible effects on the civilian population of conditions arising from the 1939–45 War. Full particulars of the data used, the methods of construction and the tabulations of these Life Tables will be found in the report of the Commonwealth Actuary which was published by the Commonwealth Statistician in 1950. This report will also appear in Volume III. of the Australian Census of 1947.

The main characteristics of the Life Tables and the conclusions to be drawn from the following comparative tables are:—

- (a) A further substantial reduction has occurred in the mortality rates in the first year of life;
- (b) A further marked improvement is evident in the vitality of both males and females up to about age 40;
- (c) A less pronounced improvement is shown in the mortality rates of both sexes between ages 40 and 80; indeed, in the case of males, the rates between ages 60 and 80 are generally in excess of those recorded in the 1932–34 Tables;
- (d) Although the 1932–34 Tables disclosed that the mortality rates of females at the child-bearing ages close to age 30 were slightly in excess of the rates for males at the same ages, the differences in the rates on this occasion are slightly in favour of the females;
- (e) The mortality rates for females are lighter than those for males at all ages;
- (f) On the whole, the vitality of the female population shows a greater degree of improvement over the last fourteen years than does that of the males.

AUSTRALIAN LIFE TABLES: NUMBER OF SURVIVORS (l_x) AT SELECTED AGES OUT OF 100,000 BIRTHS.

Age (x).	Males.			Females.		
	1920–22.	1932–34.	1946–48.	1920–22.	1932–34.	1946–48.
0	100,000	100,000	100,000	100,000	100,000	100,000
10	89,389	93,193	95,619	91,314	94,424	96,549
20	87,697	91,797	94,562	89,906	93,341	95,953
30	84,743	89,566	92,967	87,086	91,174	94,740
40	80,813	86,539	90,823	83,279	88,175	92,758
50	74,330	81,061	85,946	78,313	83,680	89,011
60	63,386	69,950	74,251	70,150	75,565	81,257
70	44,332	50,086	52,230	54,771	59,629	65,398
80	18,614	22,223	22,785	27,170	31,539	35,401

AUSTRALIAN LIFE TABLES : RATES OF MORTALITY (q_x) AT SELECTED AGES.

Age (x).	Males.			Females.		
	1920-22.	1932-34.	1946-48.	1920-22.	1932-34.	1946-48.
	(1)	(2)	(3)	(4)	(5)	(6)
0 .. ..	.07132	.04543	.03199	.05568	.03642	.02519
10 .. ..	.00156	.00119	.00072	.00127	.00087	.00050
20 .. ..	.00284	.00219	.00169	.00252	.00183	.00091
30 .. ..	.00390	.00271	.00186	.00387	.00279	.00165
40 .. ..	.00617	.00460	.00337	.00524	.00402	.00284
50 .. ..	.01158	.00966	.00919	.00808	.00744	.00641
60 .. ..	.02407	.02216	.02278	.01571	.01466	.01360
70 .. ..	.05290	.05082	.05256	.04090	.03802	.03607
80 .. ..	.13340	.12659	.12011	.11230	.10106	.10027

AUSTRALIAN LIFE TABLES : COMPLETE EXPECTATION OF LIFE (e_x) AT SELECTED AGES.

Age (x).	Males.			Females.		
	1920-22.	1932-34.	1946-48.	1920-22.	1932-34.	1946-48.
0	59.15	63.48	66.07	63.31	67.14	70.63
10	56.01	58.02	59.04	59.20	61.02	63.11
20	46.99	48.81	49.64	50.03	51.67	53.47
30	38.44	39.90	40.40	41.48	42.77	44.08
40	30.05	31.11	31.23	33.14	34.04	34.91
50	22.20	22.83	22.67	24.90	25.58	26.14
60	15.08	15.57	15.36	17.17	17.74	18.11
70	9.26	9.60	9.55	10.41	10.98	11.14

AUSTRALIAN LIFE TABLES : PROBABILITY OF SURVIVING TEN YEARS ($_{10}p_x$) AT SELECTED AGES.

Age (x).	Males.			Females.		
	1920-22.	1932-34.	1946-48.	1920-22.	1932-34.	1946-48.
0 .. ..	.89389	.93193	.95619	.91314	.94424	.96549
10 .. ..	.98107	.98502	.98895	.98458	.98853	.99383
20 .. ..	.96632	.97570	.98313	.96863	.97678	.98736
30 .. ..	.95362	.96620	.97694	.95628	.96711	.97908
40 .. ..	.91978	.93670	.94630	.94037	.94902	.95960
50 .. ..	.85276	.86293	.86393	.89576	.90302	.91289
60 .. ..	.69940	.71603	.70342	.78077	.78911	.80483
70 .. ..	.41988	.44370	.43624	.49607	.52892	.54132

CHAPTER XV.—LOCAL GOVERNMENT

§ 2. Local Government Authorities.

Finances, pp. 658–661.—Particulars of the finances of all Local Government Authorities in Australia for the year 1947–48 are as follows :—

Ordinary Services : Revenue (excluding loan receipts), £30,252,843 ; Expenditure (excluding loan expenditure) £32,141,784 ; Loan Expenditure on Works, £4,646,634.

Business Undertakings : Revenue (excluding loan receipts), £22,260,939 ; Expenditure (excluding loan expenditure), £22,227,672 ; Loan Expenditure on Works, £3,742,566.

§ 3. Local and Semi-Governmental Authorities' Debt.

Local and Semi-Governmental Authorities' Debt, p. 664.—Particulars of the debt of Local and Semi-Governmental Authorities in Australia for the year 1947–48 are as follows :—

Local Government Authorities : New Money Loan Raisings, £9,182,000 ; Funds provided for Redemption, £4,013,000 ; Accumulated Sinking Fund Balance, £10,376,000 ; Debt Outstanding, £76,100,000.

Semi-Governmental, etc., Authorities (in same order as foregoing) : £19,202,000 ; £3,471,000 ; £13,239,000 ; £226,243,000.

CHAPTER XVI.—PRIVATE FINANCE.

A. CURRENCY.

§ 3. Notes.

The Australian Note Issue, p. 707.—The average value of notes in circulation for the year 1949–50 was £223,001,000. This amount was distributed in denominations as follows :—10s., £8,496,000 ; £1, £65,695,000 ; £5, £90,561,000 ; £10, £57,871,000 ; £20, £8,000 ; £50, £69,000 ; £100, £81,000 ; and £1,000, £220,000. The amount held by the banks was £27,895,000 and by the public, £195,106,000.

B. BANKING.

§ 1. Cheque-Paying Banks.

Commonwealth Bank, pp. 715–6.—Particulars of the average liabilities and assets of the Central Banking Business and General Banking Division, etc., of the Commonwealth Bank for the year 1949–50 appear below :—

The average liabilities of the Central Banking Business (including Note Issue Department) of the Commonwealth Bank for the year ended 30th June, 1950 amounted to £842,734,000. Capital and Reserve Funds amounted to £9,898,000 ; Notes on Issue to £222,198,000 ; Special Accounts of Trading Banks to £379,632,000 ; Other Deposits of Trading Banks to £30,661,000 ; Other Liabilities to £200,345,000.

Particulars of the average assets are as follows :—Gold and Balances held abroad, £434,018,000 ; Australian Coin, £3,795,000 ; Cheques and Bills of Other Banks, £4,102,000 ; Government and Other Securities (including Treasury Bills), £348,965,000 ; Bills Receivable and Remittances in Transit, £81,000 ; and Other Assets, £51,773,000.

The average liabilities in Australia of the General Banking Division and the Rural Credits, Industrial Finance and Mortgage Bank Departments for the year ended 30th June, 1950 were £120,052,000. Of this amount deposits not bearing interest amounted to £72,311,000; Deposits bearing interest to £14,775,000; Balances due to other Banks to £14,282,000; Other Liabilities to £18,684,000.

The average assets in Australia, £135,262,000, included Cash and Cash Balances, £13,974,000; Balances with Other Banks, £535,000; Treasury Bills, £1,962,000; Other Australian Public Securities, £35,353,000; Other Securities, £74,000; Loans, Advances and Bills Discounted, £81,669,000; Other Assets, £1,695,000.

Nine Trading Banks, p. 717.—Average liabilities in Australia of the Nine Trading Banks for the year ended 30th June, 1950 were £957,501,000. Interminable Deposits or Deposit Stock amounted to £729,000; Deposits not Bearing Interest to £685,587,000; Deposits Bearing Interest to £224,477,000; Notes in Circulation to £158,000; Balances due to Other Banks to £33,227,000; Other Liabilities to £13,323,000.

Average Assets in Australia amounted to £979,662,000. These comprised Cash and Cash Balances, £51,960,000; Special Accounts with Commonwealth Bank, £377,006,000; Balances with Other Banks, £17,683,000; Treasury Bills, £26,502,000; Other Australian Public Securities, £83,813,000; Other Securities, £536,000; Loans, Advances and Bills Discounted, £403,890,000; All Other Assets, £18,272,000.

Clearing House Returns, p. 723.—The average weekly bank clearings in each capital city for the year ended 30th June, 1950 were as follows:—Sydney, £64,909,000; Melbourne, £61,003,000; Brisbane, £13,278,000; Adelaide, £11,604,000; Perth, £7,458,000; Hobart, £2,116,000; Total, £160,368,000.

Debits to Customers' Accounts, p. 724.—The average weekly debits to customers' accounts in each State for the year 1949-50 for all cheque-paying banks were as follows:—New South Wales, £115,208,000; Victoria, £101,877,000; Queensland, £29,668,000; South Australia, £19,339,000; Western Australia, £13,822,000; Tasmania, £5,605,000; Australian Capital Territory, £265,000; total, £285,784,000.

§ 2. Savings Banks.

All Savings Banks, p. 727.—The amounts on deposit in the several States at 30th June, 1950 were:—New South Wales, £258,874,000; Victoria, £257,121,000; Queensland, £92,201,000; South Australia, £87,695,000; Western Australia, £39,612,000; Tasmania, £24,272,000; Northern Territory, £859,000; Australian Capital Territory, £1,451,000; total, £762,085,000. Total excess of deposits over withdrawals during 1949-50 was £35,672,000, and interest added was £12,194,000.

D. INSURANCE.

§ 2. Life Assurance.

Life Assurance, pp. 741-4 and 745-7.—The following is a summary of the life assurance business transacted in Australia during 1949, compiled from monthly returns collected from the 21 companies registered under the Life Insurance Act 1945, and excluding the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office. Particulars shown are therefore not entirely comparable with those in Chapter XVI., which are derived from annual returns and include data of the State Government Offices.

Ordinary Department and Industrial Department, respectively:—New Policies Issued in Australia—Number, 238,898, 303,146; Sum Assured, £135,826,000, £29,897,000; Policies Matured or Otherwise Discontinued in Australia—Number, 95,595, 221,882; Sum Assured, £42,449,000, £15,051,000. Particulars of Annuities are excluded.

Premium Receipts in Australia in 1949 amounted to £32,242,000 and £11,790,000, Ordinary and Industrial Departments, respectively. Claims, etc., paid amounted to £13,928,000 and £6,124,000, respectively. Particulars of Annuities are included.

CHAPTER XVII.—PUBLIC FINANCE.

C. COMMONWEALTH AND STATE FINANCE.

Revenue and Expenditure, p. 814.—The following table shows particulars of Commonwealth and State revenue and expenditure during the year 1949–50.

COMMONWEALTH AND STATES: REVENUE AND EXPENDITURE, 1949–50.(a)

(£'000.)

Government of—	Consolidated Revenue Fund.			Loan Fund— Net Expenditure on Works and Services.
	Revenue.	Expenditure.	Surplus (+) or Deficit(—)	
New South Wales	106,504	107,682	—1,178	24,850
Victoria	55,502	55,761	—259	17,870
Queensland	37,119	37,090	+29	7,909
South Australia	(b) 26,143	26,020	+123	9,968
Western Australia	(b) 26,018	25,556	+462	8,105
Tasmania	(b) 7,077	7,082	—5	4,880
Six States	258,363	259,191	—828	73,582
Commonwealth	580,652	580,652	..	42,682
Grand Total—Unadjusted ..	839,015	839,843	—828	116,264
Adjusted	746,300	747,100	—800	116,264

(a) Preliminary. (b) The revenue for the States of South Australia, Western Australia and Tasmania includes the whole of the special grants from the Commonwealth for 1949–50 (including the part of the special grant which related to the difference between the assessed grant for 1947–48 and the special grant received in 1947–48, viz.:—South Australia, £324,000; Western Australia, £768,000; and Tasmania, £262,000).

Taxation, p. 815.—Particulars of total Commonwealth and State taxation collections in 1949–50 are shown in the following table:—

COMMONWEALTH AND STATE TAXATION: TOTAL COLLECTIONS, 1949–50.

Tax.	Commonwealth.		States.		Total.	
	Amount.	Per Head.	Amount.	Per Head.	Amount.	Per Head.
	£'000.	£ s. d.	£'000.	£ s. d.	£'000.	£ s. d.
Customs Duties	77,726	9 13 1	..	..	77,726	9 13 1
Excise Duties	66,157	8 4 4	..	..	66,157	8 4 4
Sales Tax	42,425	5 5 5	..	..	42,425	5 5 5
Land Taxes	4,210	0 10 6	1,201	0 3 0	5,411	0 13 5
Income Taxes	179,094	22 5 0	267	0 0 8	179,361	22 5 8
Social Service Contribution	100,560	12 9 10	..	..	100,560	12 9 10
Pay-roll Tax	22,728	2 16 6	..	..	22,728	2 16 6
Probate and Succession Duties	6,054	0 15 0	10,600	1 6 6	16,654	2 1 5
Entertainment Taxes	4,698	0 11 8	3,741	0 9 4	8,439	1 0 11
Liquor Taxes .. .. .	..	..	2,395	0 6 0	2,395	0 5 11
Lotteries Taxes .. .. .	..	..	1,276	0 3 2	1,276	0 3 2
Motor Taxes .. .. .	..	..	12,038	1 10 0	12,038	1 9 11
Other Taxes	15,307	1 18 1	10,223	1 5 6	25,530	3 3 6
Total	518,959	64 9 5	41,741	5 4 2	560,700	69 13 1

D. COMMONWEALTH AND STATE PUBLIC DEBT.

§ 3. Commonwealth and State Public Debt Outstanding.

Public Debt and Annual Interest Payable, pp. 818-9.—The following table shows details of the public debt of the Commonwealth and States and the annual interest payable thereon at 30th June, 1950.

COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE AT 30th JUNE, 1950.

(£'000.)

State.	Maturing in—			Total.
	London. (a)	New York. (b)	Australia.	

PUBLIC DEBT.

Commonwealth—							
War (1914-18)	..	..	..	8,333	..	156,730	165,063
War (1939-45)	..	..	..	5,775	..	1,491,476	1,497,251
Works and other Purposes	..	..	..	51,378	15,731	101,204	168,313
Total	..	..	..	65,486	15,731	1,749,410	1,830,627
States	..	..	..	304,261	24,440	750,108	1,078,809
Grand Total	..	..	..	369,747	40,171	2,499,518	2,909,436

ANNUAL INTEREST PAYABLE.

Commonwealth	..	..	..	2,177	693	48,526	51,396
States	..	..	..	9,506	904	23,771	34,181
Grand Total	..	..	..	11,683	1,597	72,297	85,577

(a) Expressed in £ sterling.

(b) £ converted at rate \$4.8665 to £1.

§ 4. Commonwealth Loan Raisings.

Loans Raised, pp. 833-4.—Particulars of loans raised by the Commonwealth between 1st July, 1949 and 30th June, 1950 are given in the following table.

COMMONWEALTH LOANS RAISED, 1949-50.

Month of Raising.	Where Raised.	Amount Invited.	Amount Subscribed.	Rate of Interest.	Year of Maturity.	Purpose.
		£'000.	£'000.	%		
September, 1949	.. Australia	115,000	{ 37,643 96,612	{ 2 3½	{ 1953 1960-63	{ Conversion and redemption loan, £89,088,000 State purposes, £45,167,000
October, 1949	.. Australia	7,000	7,000	3½	1960-63	Redemption of London loan
March, 1950	.. Australia	45,000	{ 10,668 54,134	{ 2 3½	{ 1953 1961-64	{ Conversion and redemption loan, £4,125,000 Housing and War (1939-45) Services, etc., purposes, £34,101,000 State purposes, £26,576,000

NOTE.—All loans in 1949-50 were issued at par.

E. TAXES ON INCOME.

General, p. 838.—Three major revisions were made in the assessment of income taxes on individuals for the 1950-51 income year.

- (1) The two separate levies of Income Tax and Social Services Contribution were merged into a single levy—Income Tax and Social Services Contribution.
- (2) The system of rates which increased by a fraction of one penny for every £1 increase in taxable income was replaced by a system of stepped rates of tax and contribution that increase for every £50 or multiple of £50 of taxable income.
- (3) Concessional allowances for dependants, medical expenses, life assurance premiums, superannuation contributions, etc., either by way of rebates of income tax or by way of concessional rates of social service contribution, were replaced by concessions by way of deductions from income.

Rebates of Tax, p. 838.—For the income year 1949-50 concessional allowances for dependants, medical expenses, etc., were made by means of a rebate of income tax, or by way of concessional rates of social services contribution. For 1950-51 and subsequent income years this system of concessional allowances has been replaced by a system of

concessional deductions from income. Concessional deductions are allowed only to taxpayers who are residents. The maximum amount allowed for each dependant is shown in the following table :—

DEPENDANTS : CONCESSIONAL DEDUCTIONS.

(£.)

Dependant (Resident).	Amount of Deduction. (a)
Spouse of Taxpayer	104
Daughter-housekeeper	104
One child under 16 years of age	78
Each other child under 16 years of age	52
Student child 16-21 years of age	78
Invalid relative	78
Parent of Taxpayer	104

(a) If the dependant has a separate net income, is not wholly maintained by the taxpayer, or is maintained for part only of the year, the deduction is reduced.

A taxpayer is also entitled to a concessional deduction of £104 for a housekeeper wholly engaged in keeping house and in caring for the taxpayer's children under 16 years of age or a dependent invalid relative. If the taxpayer is married, the deduction for a housekeeper is only allowed in special circumstances. This deduction is reduced if the housekeeper is employed for only part of the year.

Medical expenses, paid by a taxpayer in respect of himself, a dependant, or other child under 21 years of age, up to £100 for each person are allowed as a concessional deduction. Medical expenses include payments made to a legally qualified medical practitioner, nurse or chemist or a hospital in respect of an illness or operation, payments for dental services not exceeding £20 for any one person, payments for therapeutic treatment and eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles and the remuneration of an attendant of a person who is blind or confined to bed or invalid chair.

In addition, payments of life, etc., insurance premiums and contributions to superannuation and similar funds and friendly societies not exceeding an aggregate of £200, and funeral expenses of a dependant not exceeding £30 are allowed as concessional deductions.

In addition to concessional deductions, all taxpayers (residents and non-residents) are allowed a deduction from income of rates which are annually assessed and taxes on land, gifts to charitable, benevolent or patriotic funds, and one-third of amounts paid as calls to certain mining, forestry and oil-prospecting companies. Previously, allowance for these items was made by means of a rebate of income tax or concessional rates of social services contribution.

Effective Exemptions from Tax, p. 840.—For the income year 1950-51 resident taxpayers are exempt from Income Tax and Social Services Contribution if their income does not exceed the amounts shown in the following table.

RESIDENT TAXPAYERS : EFFECTIVE EXEMPTIONS FROM TAX.

(£.)

Taxpayer with—	Income Tax and Social Service Contribution— 1950-51 Income.
No dependants	104
Wife	208
Wife and one child	286
Wife and two children	338
Wife and three children	390
Wife and four children	442

Rates of Income Tax and Social Services Contribution on Individuals, p. 841.—The following table shows the income tax and social services contribution on 1950-51 incomes.

**INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—INDIVIDUALS, 1950-51
INCOME : BASIC TAX AND CONTRIBUTION.**

Total Taxable Income.		Column 3.	Column 4.	
Column 1.	Column 2.	Tax and contribution on amount set out in Column 1.	Tax and Contribution on Remainder of Taxable Income.	
Not less than—	Not more than—			
£	£	£ s. d.	£	
Nil	100	Nil	Nil	
100	150	0 8 4	6d. in each £1 in excess of 100	
150	200	1 13 4	11d. " " " 150	
200	250	3 19 2	16d. " " " 200	
250	300	7 5 10	21d. " " " 250	
300	400	11 13 4	26d. " " " 300	
400	500	22 10 0	32d. " " " 400	
500	600	35 16 8	38d. " " " 500	
600	700	51 13 4	44d. " " " 600	
700	800	70 0 0	48d. " " " 700	
800	900	90 0 0	52d. " " " 800	
900	1,000	111 13 4	56d. " " " 900	
1,000	1,200	135 0 0	64d. " " " 1,000	
1,200	1,400	188 6 8	72d. " " " 1,200	
1,400	1,600	248 6 8	80d. " " " 1,400	
1,600	1,800	315 0 0	88d. " " " 1,600	
1,800	2,000	388 6 8	96d. " " " 1,800	
2,000	2,400	468 6 8	104d. " " " 2,000	
2,400	2,800	641 13 4	112d. " " " 2,400	
2,800	3,200	828 6 8	120d. " " " 2,800	
3,200	3,600	1,028 6 8	128d. " " " 3,200	
3,600	4,000	1,241 13 4	136d. " " " 3,600	
4,000	4,400	1,468 6 8	144d. " " " 4,000	
4,400	5,000	1,708 6 8	152d. " " " 4,400	
5,000	6,000	2,088 6 8	160d. " " " 5,000	
6,000	8,000	2,755 0 0	168d. " " " 6,000	
8,000	10,000	4,155 0 0	176d. " " " 8,000	
10,000	upward	5,621 13 4	180d. " " " 10,000	

If the taxable income exceeds £400 and includes income from property, the amount of the income from property is subject to the further tax shown in the following table.

FURTHER TAX ON PROPERTY INCOME.

Taxable Income from Property.		Column 3.	Column 4.
Column 1.	Column 2.	Further Tax and Contribution on Taxable Income shown in Column 1.	Further Tax and Contribution on Remainder of * Taxable Income from Property.
Not less than—	Not more than—		
£	£	£ s. d.	£
Nil	100	Nil	Nil
100	1,000	Nil	8d. on each £1 in excess of 100
1,000	4,000	30 0 0	16d. " " " 1,000
4,000	6,000	230 0 0	8d. " " " 4,000
6,000	10,000	296 13 4	4d. " " " 6,000
10,000	upwards	363 6 8	

If the total taxable income does not exceed £1,000, the further tax on property income cannot exceed twelve pence for every £1 by which the total taxable income exceeds £400. The application of this provision is illustrated by the following example based on an income of £600 derived wholly from property :—

Further tax on £600 property income—

	£	s.	d.
By applying scale rate £500 at 8d. in the £1	..	16	13 4
By applying limiting provision £200 at 1s. in the £1		10	0 0

Taxes on Sample Individual Incomes, p. 842.—The following table shows the income Tax and Social Services Contribution payable by taxpayers with various incomes and numbers of dependants on income derived in 1950-51 :—

COMMONWEALTH TAXES ON INCOME, 1950-51.

(£.)

Income.	Income from Personal Exertion.				Income from Property.
	Taxpayer with no Dependents.	Taxpayer with Dependent Wife.	Taxpayer with Dependent Wife and one Child.	Taxpayer with Dependent Wife and two children.	Taxpayer with no Dependents.
150	1.65	..	..	..	1.65
200	3.95	..	..	..	3.95
250	7.30	1.55	..	..	7.30
300	11.65	3.75	0.85	..	11.65
350	17.10	7.00	2.50	0.80	17.10
400	22.50	11.30	5.15	2.40	22.50
500	35.85	22.05	13.60	8.70	40.85
600	51.65	35.30	24.90	18.80	61.65
800	90.00	69.25	54.95	46.30	110.00
1,000	135.00	110.80	93.90	83.20	165.00
1,250	203.35	173.95	153.15	139.25	250.00
1,500	281.65	247.15	223.75	208.15	345.00
2,000	468.35	426.75	395.55	375.85	565.00
3,000	928.35	876.35	837.35	812.45	1,091.70
4,000	1,468.35	1,409.40	1,365.20	1,335.75	1,698.35
5,000	2,088.35	2,022.45	1,973.05	1,940.15	2,351.70
6,000	2,755.00	2,685.65	2,633.65	2,599.00	3,051.65
8,000	4,155.00	4,082.20	4,027.60	3,991.20	4,485.00
10,000	5,621.65	5,545.40	5,488.20	5,450.05	5,985.00
12,500	7,496.65	7,418.65	7,360.15	7,321.15	7,860.00
15,000	9,371.65	9,293.65	9,235.15	9,196.15	9,735.00

Company Income Taxes, p. 843.—For 1950-51 income year rates of Income Tax are the same as the rates payable by companies for the 1949-50 income year.

CHAPTER XVIII.—MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

Quantity and Value of Production, pp. 846-7.—In the table hereunder particulars are given of the quantity and value of production in Australia of the principal minerals during the years 1948 and 1949 :—

MINERAL PRODUCTION : QUANTITIES AND VALUES, AUSTRALIA.

Year.	Coal.		Copper and Copper Ore.	Gold.	Iron-stone and Ore.	Lead.	Silver.	Silver-lead Ore, Concentrates.	Tin and Tin Ore.	Zinc and Concentrates.	All Minerals.
	Black.	Brown.									

QUANTITIES.

		'000 tons.	'000 tons.	Tons.	Fine oz.	'000 tons.	Tons.	'000 oz.	Tons.	Tons.	Tons.	
1948 ..	..	14,781	6,692	12,782	885,507	2,054	39,258	3,525	229,462	2,116	299,508	..
1949 ..	..	14,098	7,371	17,151	889,057	1,473	37,697	4,192	222,991	2,224	298,567	..

VALUES (£'000.).

		18,805	1,188	1,744	9,530	2,356	3,802	662	16,667	1,000	5,770	64,392
1948 ..	..	20,965	1,469	2,074	10,812	1,484	4,137	869	14,464	1,082	7,107	61,504
1949 ..	..										

CHAPTER XIX.—PASTORAL PRODUCTION.

Live-stock, Meat and Wool Produced.—The following table shows, for each State, the numbers of live-stock at 31st March, 1950, and the amounts of meat and wool produced during 1948-49 and 1949-50 :—

LIVE-STOCK, MEAT AND WOOL PRODUCED.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.Terr.	A.C.T.	Australia.
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HORSES ('000.), p. 893.

1950 ..	342.4	200.1	317.3	82.6	59.2	21.2	32.9	1.0	1,056.7
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CATTLE ('000.), p. 893.

1950 ..	3,440.5	2,230.9	6,304.8	464.1	864.9	274.7	1,048.9	11.2	14,640.0
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SHEEP ('000.), p. 893.

1950 ..	53,298.0	19,161.1	17,582.2	9,477.0	10,923.2	2,170.3	25.7	253.5	112,891.0
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LIVE-STOCK, MEAT AND WOOL PRODUCED—*continued.*

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Australia.
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Pigs ('000.), p. 893.

1950 ..	333.2	212.9	391.9	69.5	78.8	35.9	0.4	0.4	1,123.0
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BEEF, INCLUDING VEAL ('000 TONS BONE-IN WEIGHT), p. 908.

1948-49..	180.3	118.0	202.5	29.6	32.8	9.8	3.3	1.0	577.3
1949-50(a)	182.9	126.6	213.9	32.5	36.4	11.8	3.4	1.3	608.8

MUTTON AND LAMB ('000 TONS BONE-IN WEIGHT), p. 913.

1948-49..	114.3	114.7	18.5	39.5	24.9	7.6	..	0.9	320.4
1949-50(a)	119.1	147.3	18.0	40.0	22.8	8.9	..	1.1	357.2

TOTAL MEAT (INCLUDING PIGMEATS) IN TERMS OF FRESH ('000 TONS BONE-IN WEIGHT).

1948-49..	322.6	255.3	246.0	76.5	65.4	20.3	3.4	2.0	991.5
1949-50(a)	327.8	291.3	258.0	78.8	65.7	23.3	3.5	2.5	1,050.9

WOOL (AS IN THE GREASE) PRODUCED ('000 lb.), p. 916.

Season—					(b)		(c)	
1948-49	463,208	195,405	147,767	105,460	99,429	16,846	305	1,977
1949-50(d)	515,043	215,889	153,396	106,394	97,750	16,959	405	2,123

(a) Subject to revision. (b) For year ended previous December. (c) Estimated. (d) Subject to revision. During the year ended 30th June, 1950, receipts of first-hand wools into brokers' stores plus wool exported on skins and wool exported for sale overseas totalled 1,155.4 million lb. as in the grease.

CHAPTER XX.—AGRICULTURAL PRODUCTION.

§ 3. Distribution, Production and Value of Crops.

Principal Crops, pp. 936-8.—The following particulars show the area, production and average yield per acre of the principal crops in Australia during the 1948-49 and 1949-50 seasons, respectively :—

Area ('000 acres) : Wheat, 12,583, 12,240 ; Oats, 1,770, 1,748 ; Maize, 182, 194 ; Hay, 1,580, 1,605 ; Sugar-cane, 384, 398 ; Total Crops, 20,636, 20,605.

Production ('000) : Wheat, 190,703 bush., 218,221 bush. ; Oats, 23,601 bush., 27,421 bush. ; Maize, 5,188 bush., 6,313 bush. ; Hay, 2,292 tons, 2,437 tons ; Sugar-cane, 6,708 tons, 6,849 tons ; Cane sugar, 943 tons, 940 tons.

Average Yield per Acre : Wheat, 15.15 bush., 17.83 bush. ; Oats, 13.34 bush., 15.69 bush. ; Maize, 28.51 bush., 32.53 bush. ; Hay, 1.45 tons, 1.52 tons ; Sugar-cane 25.19 tons, 24.35 tons ; Cane sugar, 3.54 tons, 3.34 tons. (Sugar-cane and Cane sugar yields are per acre of productive crop).

CHAPTER XXI.—FARMYARD, DAIRY AND BEE PRODUCTS.

Milk, Butter, Cheese, Pork, Bacon, Ham.—Particulars of total production of whole milk and the total amounts of butter and cheese (showing factory production by States and an estimate of factory and farm production for Australia), pork, bacon and ham produced in each State during the year 1949-50 are shown below :—

MILK, BUTTER, CHEESE, PORK, BACON AND HAM PRODUCTION, 1949-50.(a)

N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
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TOTAL WHOLE MILK PRODUCED ('000 GALLONS), p. 1032.

307,115	486,955	281,233	87,951	49,198	40,445	636	1,253,533
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BUTTER (Tons), pp. 1033-4.

36,812	63,499	48,196	8,249	6,702	4,974	..	(b) 173,182
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CHEESE (Tons), pp. 1034-5.

2,806	21,292	9,050	10,584	703	388	..	(b) 44,859
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PORK (Tons, Bone-in Weight), p. 1041.

8,985	6,552	12,550	1,807	1,875	1,208	85	(c) 33,103
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BACON AND HAM (Tons, Cured Weight), p. 1042.

12,357	7,928	9,982	3,340	3,436	996	..	38,039
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(a) Subject to revision.
Northern Territory, 41 tons.

(b) Includes an estimate of farm production.

(c) Includes

CHAPTER XXIV.—MANUFACTURING INDUSTRY.

Summary.—The table following gives a summary of the operations in manufacturing industries during 1948-49 :—

FACTORIES : SUMMARY, 1948-49 (a).

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1. Factories .. No.	16,087	12,691	4,083	2,927	2,925	1,346	40,059
2. Hands employed (b) ..	378,380	292,006	82,945	75,945	38,354	22,602	890,232
3. Salaries and wages paid(c)£	146,535,642	112,410,440	29,446,634	29,510,207	12,927,830	8,456,406	339,287,159
4. Value of power, fuel, light &c., used .. £	21,611,375	11,336,502	4,085,459	5,123,290	2,745,181	1,160,015	46,061,822
5. „ materials used .. £	336,913,961	252,741,001	97,044,670	75,227,229	29,198,424	19,422,419	810,547,704
6. „ production .. £	251,198,845	182,760,376	53,539,674	43,667,633	21,174,228	16,074,602	568,415,358
7. „ output of factories £	609,724,181	446,837,879	154,669,803	124,018,152	53,117,833	36,657,036	1,425,024,884
8. „ land and buildings £	101,240,784	73,383,784	18,508,165	22,217,619	10,054,598	7,334,911	232,739,861
9. „ plant and machinery .. £	99,812,061	76,079,598	25,756,957	22,791,991	9,800,130	12,253,470	246,494,207

(a) Subject to revision.

(b) Average over whole year ; includes working proprietors.

(c) Excludes

amounts drawn by working proprietors.

Value of Production in Classes of Industry, p. 1115.—The following table shows, for the year 1948-49, the value of production in Australia for the various classes of factories :—

FACTORIES : VALUE OF PRODUCTION, AUSTRALIA, 1948-49.(a)

(£.)

Class of Industry.	Value of Production.	Class of Industry.	Value of Production.
I. Treatment of Non-metalliferous Mine and Quarry Products ..	11,251,798	IX. Food, Drink and Tobacco..	89,800,039
II. Bricks, Pottery, Glass, etc. ..	10,846,562	X. Woodworking and Basketware ..	29,645,019
III. Chemicals, Dyes, Explosives, Paints, Oils and Grease ..	33,554,814	XI. Furniture, Bedding, etc. ..	10,886,418
IV. Industrial Metals, Machines, Implements and Conveyances ..	210,854,442	XII. Paper, Stationery, Printing, Bookbinding, etc. ..	35,304,518
V. Precious Metals, Jewellery and Plate ..	3,436,033	XIII. Rubber ..	7,675,754
VI. Textiles and Textile Goods ..	35,861,749	XIV. Musical Instruments ..	611,730
VII. Skins and Leather ..	10,360,095	XV. Miscellaneous Products ..	10,557,888
VIII. Clothing ..	52,236,241	XVI. Heat, Light and Power ..	15,532,258
		Total ..	568,415,358

(a) Subject to revision.

CHAPTER XXVII.—REPATRIATION.

§ 2. War Pensions and § 3. Service Pensions.

Number of Pensioners and Expenditure, pp. 1214 and 1217.—The following table shows the number of war and service pensions in force at 30th June, 1950, and expenditure for the year 1949-50 :—

WAR AND SERVICE PENSIONS : NUMBER AND PAYMENTS, 1949-50.

Particulars.	Place of Payment.							Total.
	N.S.W. (a)	Vic.	Q'land.	S. Aust. (b)	W.Aust.	Tas.	Oversea.	
War Pensions—								
1914-18 War—								
Number ..	48,853	48,095	16,061	9,903	12,625	6,618	4,117	146,272
Amount Paid £'000 ..	3,537	3,266	1,105	702	852	550	327	10,429
1939-45 War—								
Number ..	124,836	73,498	40,957	35,759	36,253	12,550	1,131	324,984
Amount Paid £'000 ..	3,856	2,592	1,276	1,155	1,036	468	52	10,435
Service Pensions—								
Number ..	5,478	3,883	2,805	1,641	1,953	578	..	16,338
Amount Paid £'000 ..	478	347	248	142	166	51	..	1,432

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

CHAPTER XXVIII.—MISCELLANEOUS.

§ 18. New Building.

Summary, pp. 1237-9.—The following table provides a summary of the new building activity in each State and the Australian Capital Territory during the year ended 30th June, 1950:—

NEW BUILDINGS: SUMMARY, 1949-50.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
New Buildings—Value £'000—								
Commenced	51,277	46,497	16,994	11,301	8,459	8,379	1,365	144,272
Completed	40,920	34,673	13,953	9,074	5,352	5,342	1,462	110,776
Under construction(a)	75,006	55,729	11,805	10,519	10,022	8,989	4,232	176,302
New Houses—Number—								
Commenced	22,055	21,035	10,009	6,109	5,031	3,664	389	68,292
Completed	18,766	15,603	9,447	4,904	3,509	2,852	404	55,485
Under construction(a)	26,402	21,353	4,520	5,241	3,957	3,357	678	65,508
New Flats—Number—								
Commenced	1,487	328	38	..	399	16	24	2,292
Completed	1,075	246	16	..	101	24	32	1,494
Under construction(a)	1,961	725	22	..	313	17	122	3,160
Persons engaged in new building(a)	42,393	31,684	15,643	8,743	6,908	5,700	2,022	113,093

(a) At 30th June, 1950.

NOTE.—For definitions and other explanatory matter regarding data presented, see Chapter XXVIII., pp. 1236 and 1238.

The value of new buildings completed during 1949-50 comprised:—Houses, £89,771,000; Flats, £2,558,000; Shops with Dwellings, £1,023,000; Shops without Dwellings, £434,000; Hotels, Guest Houses, Boarding Houses, etc., £1,274,000; Factories, £6,444,000; Other New Buildings, £9,242,000.

The number of new houses completed during 1949-50 comprised:—Brick, brick veneer, concrete and stone, 19,995; Wood (weatherboard, etc.), 19,912; Fibro cement, 14,846; Other, 732.

§ 22. Valuation of Australian Production.

Net Value of Production, p. 1248.—The following table shows particulars of the net value of production in each State of the various industry groups during the year 1948-49:—

NET VALUE OF RECORDED PRODUCTION, 1948-49.

(£'000.)

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Agriculture	41,468	36,039	27,535	23,933	18,508	3,980	151,463
Pastoral	99,746	51,924	46,181	20,568	20,802	5,518	244,739
Dairying	20,086	22,259	16,498	5,256	2,122	1,332	67,553
Poultry	8,123	7,829	853	1,834	671	886	20,196
Bee-farming	782	247	92	276	104	8	1,509
Total, Rural	170,205	118,298	91,159	51,867	42,207	11,724	485,460
Trapping	2,729	3,776	235	589	258	199	7,786
Forestry	6,561	3,940	3,804	2,104	1,791	2,105	20,305
Fisheries	1,479	522	704	232	680	558	4,175
Mines and Quarries	28,198	2,172	4,143	3,597	5,873	4,369	48,352
Total, Non-rural ..	38,967	10,410	8,886	6,522	8,602	7,231	80,618
Total, All Primary	209,172	128,708	100,045	58,389	50,809	18,955	566,078
Factories	251,199	182,760	53,540	43,668	21,174	16,075	568,416
Total, All Industries ..	460,371	311,468	153,585	102,057	71,983	35,030	1,134,494

GENERAL INDEX.*

Note.—This index is followed by a list of maps, graphs and diagrams, also a list of special articles, etc., in previous issues of the Official Year Book. Area, population, etc., of particular localities are indexed under the locality concerned. Where the subject matter extends continuously over more than one page the first page only is indexed.

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